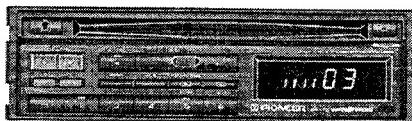


Service Manual

• DEH-770/UC



ORDER NO.
CRT1354

HIGH-POWER COMPACT DISC PLAYER WITH FM/AM TUNER

DEH-770

UC

DEH-85

US

DEH-760

UC

DEH-660

UC

DEH-630

US

DEH-710

ES

DEH-610

ES

**COMPACT
DISC
DIGITAL AUDIO**

HIGH-POWER COMPACT DISC PLAYER WITH FM/MW/LW TUNER

DEH-770SDK

WG

DEH-770

EW

DEH-760SDK

WG

DEH-760

EW

Note:

- See the separate manual CX-173 (CRT1161) for the CD mechanism description.
- Refer to the service manual CDX-M100 (CRT1136) for finding circuit description which are not shown in this manual.

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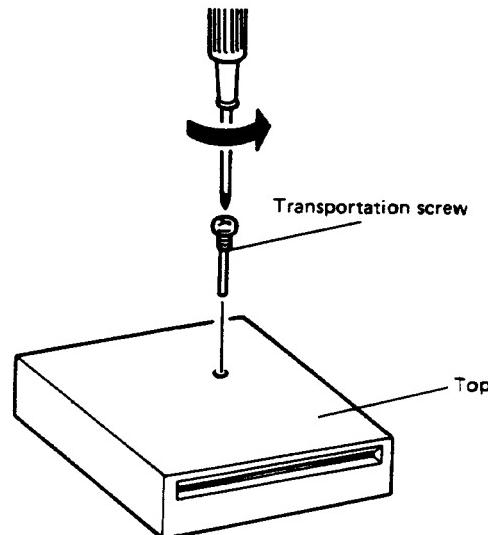
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FK FEB. 1991 Printed in Japan.

- **CD Player Service Precautions**

1. Since these screws protect the mechanism during transport, be sure to affix it when it is transported for repair, etc.
2. For pickup unit (CGY1015) handling, please refer to "Disassembly" (Fig. 4). During replacement, handling precautions shall be taken to prevent an electrostatic discharge (protection by a short pin).
3. During disassembly, be sure to turn the power off since an internal IC might be destroyed when a connector is plugged or unplugged.



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SAFETY INFORMATION (UC, US MODEL)

CAUTION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual. Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

Lead in solder used in this product is listed by the California Health and Welfare agency as a known reproductive toxicant which may cause birth defects or other reproductive harm (California Health & Safety Code, Section 25249.5). When servicing or handling circuit boards and other components which contain lead in solder, avoid unprotected skin contact with the solder. Also, when soldering do not inhale any smoke or fumes produced.

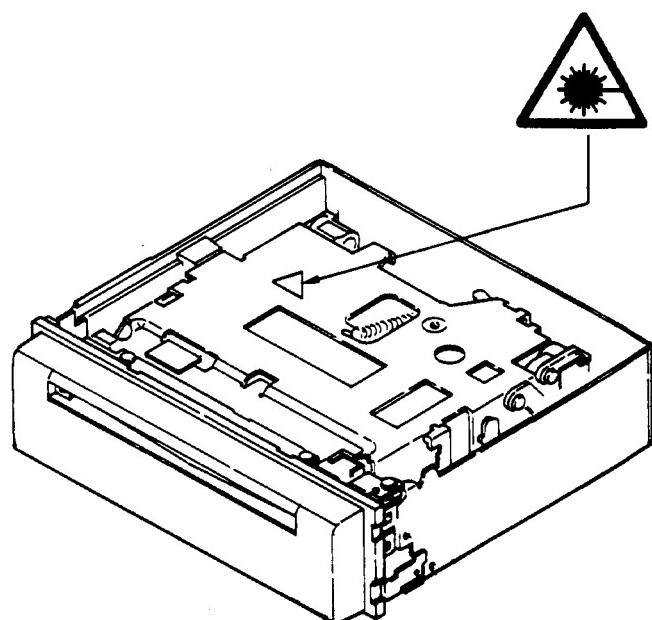
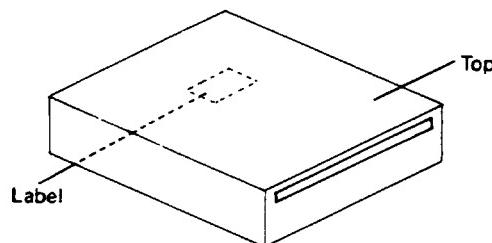
SAFETY INFORMATION (EW MODEL)

1. Safety Precautions for those who Service this Unit.

- Follow the adjustment steps (see pages 13 through 35) in the service manual when servicing this unit. When checking or adjusting the emitting power of the laser diode exercise caution in order to get safe, reliable results.

Caution:

1. During repair or tests, minimum distance of 13cm from the focus lens must be kept.
2. During repair or tests, do not view laser beam for 10 seconds or longer.
2. A "CLASS 1 LASER PRODUCT" label is affixed to the bottom of the player.
3. The triangular label is attached to the mechanism unit plate unit.



4. Specifications of Laser Diode

Specifications of laser radiation fields to which human access is possible during service.

Wavelength = 780 nanometers

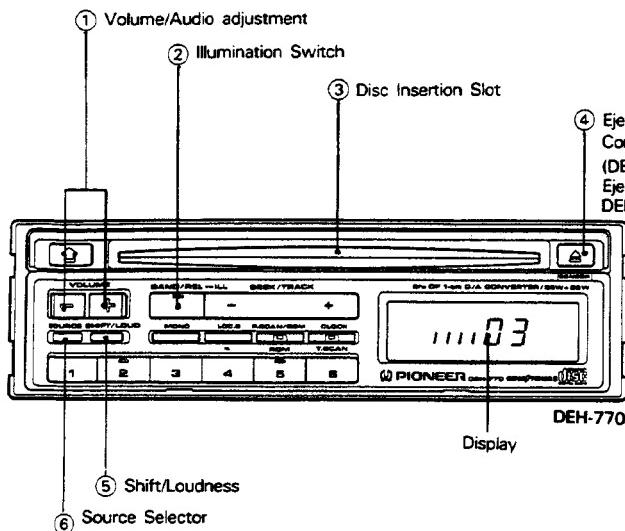
Radiant power = 69.7 microwatts

(Through a circular aperture stop having a diameter of 80 millimeters)

0.55 microwatts

(Through a circular aperture stop having a diameter of 7 millimeters)

1. ADJUSTING VOLUME AND TONE



Adjusting Volume

Pressing the (+) side of button ① increases the volume, while the (-) side decreases it.

4 - 15

Adjusting the Fader

This function controls the balance between the front and rear speakers of a 4-speaker system. Pressing the (+) side of button ① shifts the balance to the front speakers, while the (-) side shifts it to the rear speakers. For 2-speaker systems, set FAD 0.

FAD 0

Adjusting Bass

Pressing the (+) side of button ① increases bass, while the (-) side decreases bass.

BAS 0

Adjusting Treble

Pressing the (+) side of button ① increases treble, while the (-) side decreases treble.

TRE 0

Adjusting Balance

Pressing the (-) side of button ① shifts the balance to the left speaker, while the (+) side shifts it to the right speaker.

BAL 0

- When you're adjusting fader, bass, treble, or balance settings, the indicator will stop at the center setting. About 5 seconds after adjustment has been made, the display returns to its previous state.

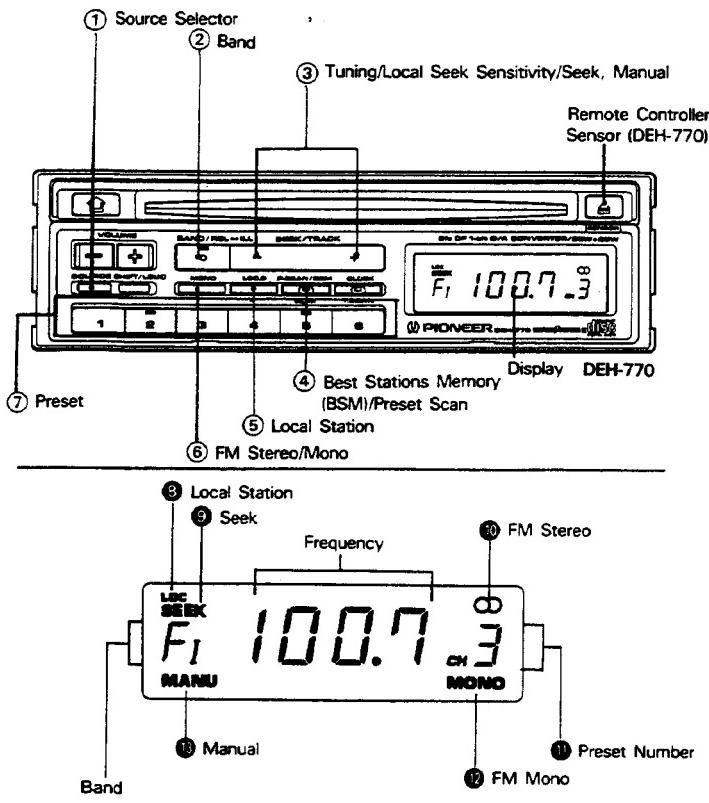
Using the Loudness Function

Press button ⑤ for about two seconds and the "LOUD" indication will appear on the display. This loudness function lets you enhance both high and low frequencies to give a more natural sound at low volumes. To cancel this function, press button ⑤ again for about two seconds.

Switching Illumination Colour

You can select either green or amber for the switch illumination colour. To switch the colour, hold down button ② for two seconds.

2. USING THE RADIO



1 Press Button ① to switch the radio power on.

2 Press Button ② to select a band.

F_I → F_{II} → F_{III} → R
(FM1) (FM2) (FM3) (AM)

3 Use seek tuning to tune in a frequency.

Confirm that the SEEK indicator ① is shown on the display (if not, press the (+) and (-) sides of button ③ at the same time). Press the (+) side of button ③ to automatically tune in the next higher receivable frequency, and the (-) side for a lower frequency.

4 Adjust volume and tone (see page 5).

5 Assign the tuned frequency to one of the Buttons in Bank ⑦ (preset memory).

Press and hold down one of the buttons in Bank ⑦ for at least two seconds. The frequency is assigned to the selected button when the preset number ⑥ stops flashing on the display. Up to 18 FM stations (6 each for FM1, FM2 and FM3), and six AM stations can be assigned to the preset memory buttons in Bank ⑦.

6 Once a frequency is assigned to a Button in Bank ⑦, you just need to press that Button to tune it in.

This also causes the number of the button pressed to appear at Position ⑥ on the display.

Preset Scan Tuning

This function lets you automatically monitor the stations assigned to the preset buttons.

1. Press the button ④, and the preset number ⑥ flash. Each station assigned to the buttons in Bank ⑦ will be automatically tuned in for about eight seconds.
2. When you hear a station that you like, press button ④ again to cancel preset scan tuning and remain at that station.

BSM (Best Stations Memory)

This function automatically locates stronger stations and automatically assigns their frequencies to the buttons in Bank ⑦, from strongest to weakest. It comes in handy when trying to find local stations while driving.

1. Press button ② and select a band.
2. Hold down button ④. After about two seconds, a "beep" will sound to signal that the BSM search has started. At this time, " - - - - " will flash on the display.



3. The frequency display will return once BSM search is complete, and frequencies are assigned to buttons 1 through 6 in Bank ⑦.

- At the end of the BSM search, the displayed frequency is that assigned to button ① of Bank ⑦.
- If there are fewer than six strong stations in the area, some of the buttons in Bank ⑦ will not be assigned frequencies, so they will retain any frequencies assigned to them previously.
- BSM search may take as long as 30 seconds in areas where there are few strong stations.
- You can cancel BSM search by pressing button ④ again.

Manual Tuning

Use manual tuning when stations are too weak to be picked up by seek tuning.

1. Press both (+) and (-) sides of button ③ simultaneously to illuminate "MANU" ⑥.
2. Each press of the (+) side of button ③ increases the frequency in 0.2 MHz steps in the FM band, 10 kHz in the AM band. Pressing the (-) side of button ③ decreases the frequency. Holding down either side of button ③ changes the frequency at high speed.

Switching between FM Stereo and Mono

Generally, it is best to allow the "Super Tuner III" function to automatically set the optimum listening conditions. When there is a large amount of noise, you can press button ⑥ for clearer mono reception ("MONO" ⑩ will appear on the display).

Adjusting Seek Sensitivity

The seek tuning function of this tuner lets you select between a local setting for reception of strong stations only, and a DX (distant) setting for reception of weaker stations. The local setting also has four seek tuning sensitivity levels for FM and two levels for AM to match local conditions.

Changing the Local Seek Sensitivity

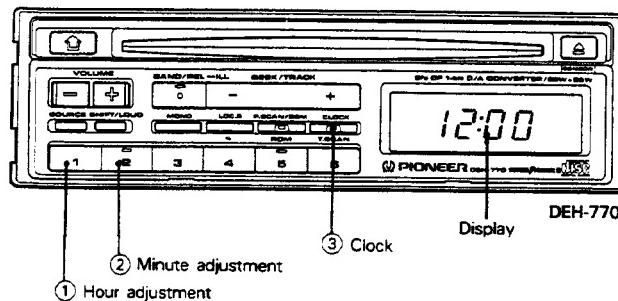
1. Use button ② to select a band.
2. Hold down the button ⑤ for more than two seconds, and the display will show you the current local seek sensitivity for about five seconds.



(Example: LOC-2)

3. While the local seek sensitivity remains on the display, press the (+) side of button ③ to increase the sensitivity level, and the (-) side to decrease the level as shown below.
 FM : LOC-1 → LOC-2 → LOC-3 → LOC-4
 AM: LOC-1 → LOC-2
 The LOC-4 setting allows reception of only the strongest stations, while lower settings let you receive progressively weaker stations.
- The display of local seek sensitivity returns to the frequency when about five seconds have elapsed after the change of sensitivity.

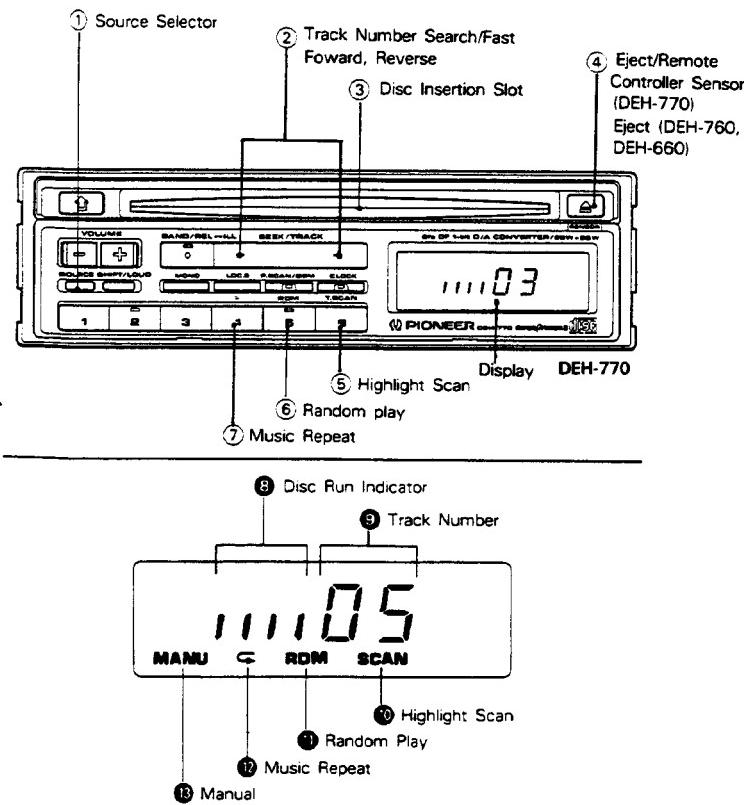
3. USING THE CLOCK DISPLAY



Switching between Local and DX

Press button ⑤ to switch between Local and DX (distant) seek tuning. When "LOC" ⑥ is shown on the display, seek tuning is performed with the local seek sensitivity. Otherwise, seek tuning is performed with the DX seek sensitivity.

4. PLAYING COMPACT DISCS



- 1** When a disc is inserted half-way into the disc insertion slot ③ with its label side upward, the disc is automatically loaded and played.

(Track number ⑨ and disc run ⑧ indications will appear on the display.)

- 2** Use track number search to select a track.

See that no "MANU" ⑩ illuminates on display. If it does, then turn it off by pressing the (+) and (-) sides of Button ② simultaneously. Press the (+) side of button ② to increase the number at position ⑨, or the (-) side to decrease the number. Holding either side of button ② down changes the track number at high speed.

- 3** Adjust volume and tone (see page 5)

- 4** To eject or change the disc, press Button ④.

If an ejected disc is pushed back into the slot, it will be loaded and played again.

Note:

- If a disc can only be inserted halfway, or if the disc does not play after being loaded, something may be wrong with the disc. Eject the disc by pressing button ④, and check it. If it is all right, insert it again.
- Insert the disc with its label (printed) side facing up. If the disc is inserted with the label side facing down, it will not play, and the recorded side may be damaged.
- Do not insert two discs into the slot at the same time. This may cause a malfunction.

Using Highlight Scan

Highlight Scan is designed to enable you to conveniently scan all pieces of music contained in the disc by playing 10 seconds each at your designated point of time after the start of the music. The starting time of play is set at one minute in factory. Therefore, the Highlight Scan begins one minute after the start unless you designate it otherwise.

When you do not want to change the factory-set time:

1. Press Button ⑤, and "SCAN" ⑥ will illuminate.
2. The contained pieces of music will be played in sequence for 10 seconds each one minute after the beginning.
3. Press Button ⑤ again when your selected piece comes, and it will continue to play. At this point, the Highlight Scan discontinues to operate.
- The previous function automatically resumes when a piece of music with which Highlight Scan began returns.

Changing the Starting Time of Highlight Scan

When you want to set the starting time of the Highlight Scan to 30 seconds:

1. Press Button ②, (+) and (-) sides simultaneously, and "MANU" ⑥ will illuminate and time numerals will be displayed.
2. Keep pressing either (+) or (-) side of Button ② until the numerals reaches 30.



3. Hold down Button ⑤ for two or more seconds, and "SCAN" ⑥ will illuminate and the Highlight Scan will begin 30 seconds after the start of the next piece of music.

- The starting time of Highlight Scan can be designated at ten or tens of seconds only. A tenth or tenths of seconds can be disregarded.
- If a piece of music ends before your designated point of time at which Highlight Scan starts, the scanning is performed for its beginning 10 seconds.
- If a piece of music lasts less than 10 seconds, so does the Highlight Scan.
- You may wish to change the starting time longer without suspending the function. You may do so, however, only to a relatively long-playing piece of music because, as a matter of course, the time cannot be set so as to come after the end of the music.

5. CONNECTING THE UNITS

- Before making final connections, make temporary connections then operate the unit to check for any connecting cord problems.
- Refer to the owner's manual for details on connecting the various cords of the power amp and other units, then make connections correctly.
- Be sure to connect the memory power supply lead (orange) to a terminal that is always supplied with power regardless of the vehicle's ignition switch position. If this connection is made incorrectly or is forgotten, the unit will not work at all.
- Don't pass the orange lead through a hole into the engine compartment to connect to the battery. This will damage the lead insulation and cause a very dangerous short.
- Since a unique BPTL circuit is employed, never wire so the speaker leads are directly grounded or the left and right speaker \ominus leads are common.
- Speakers connected to this unit must be high-power types possessing minimum rating of 25W and impedance of 4 to 8 ohms. Connecting speakers with output and/or impedance values other than those noted here can damage the speakers.

Using Random Play

This function uses the built-in microprocessor to randomly play tracks from the disc.

1. Press button ⑥, "RDM" ⑥ will appear on the display. Once the current track has been played, the microprocessor will randomly select the next track.
2. To cancel random play, press button ⑥ again.

Using Music Repeat

This function lets you listen to a track as many times as you wish.

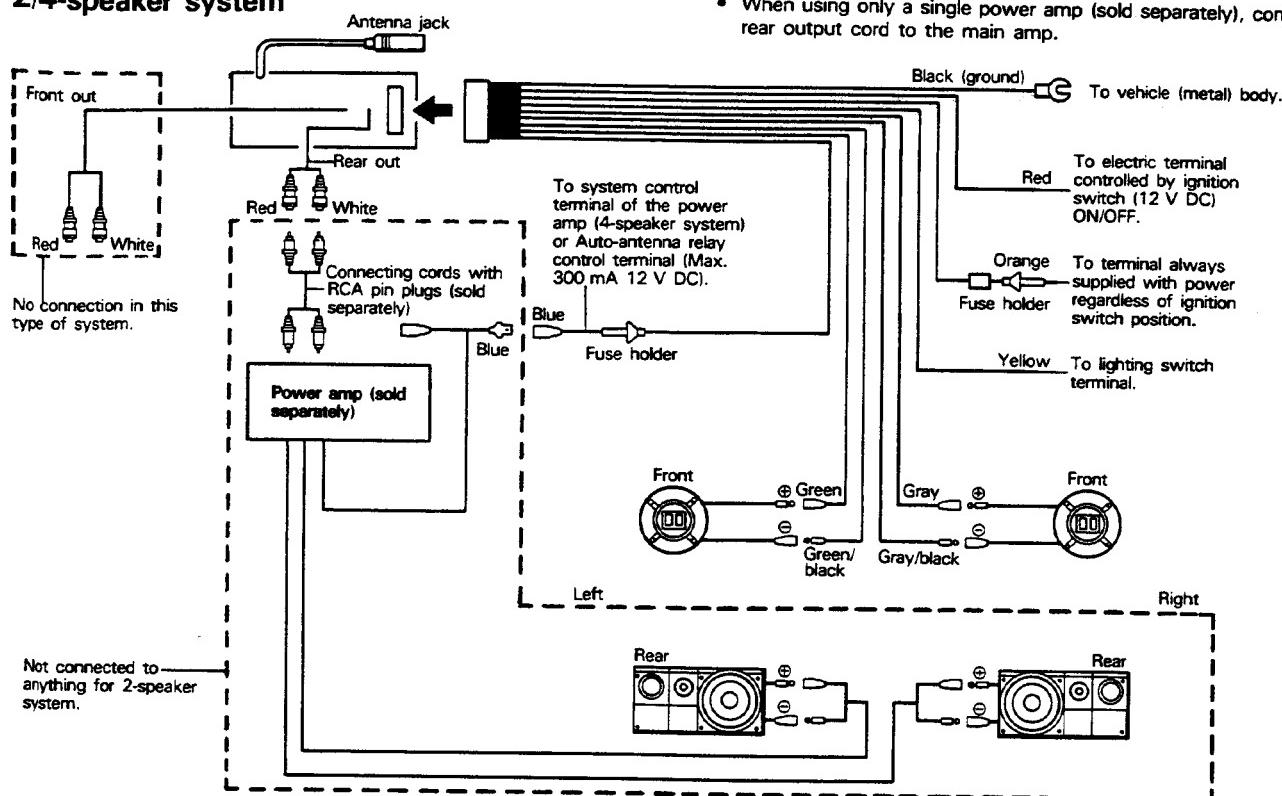
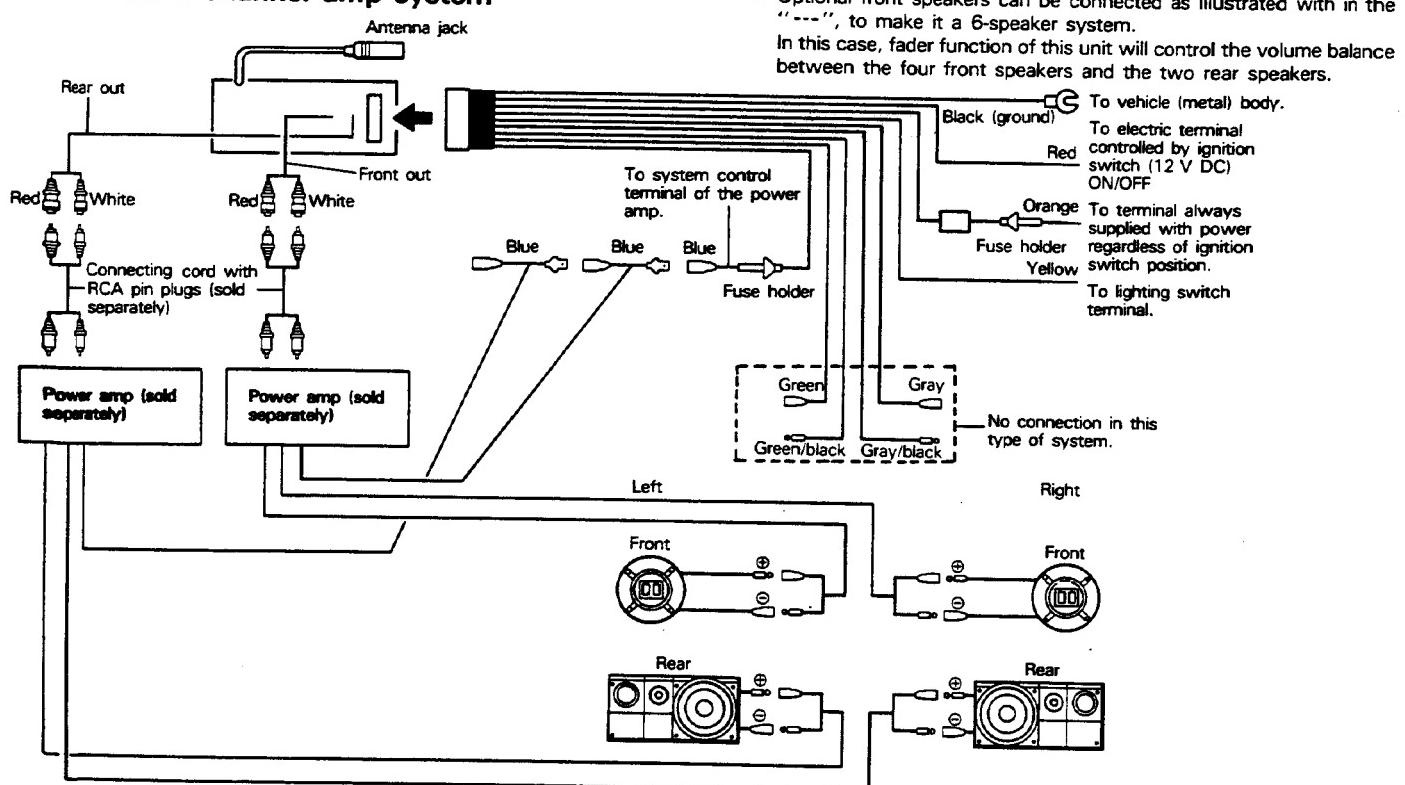
1. While the track you want to repeat is playing, press button ⑦. "REP" ⑥ will appear on the display. Now the track will repeat until the music repeat function is canceled.
2. To cancel music repeat, press button ⑦ again.
- When music repeat is not operational, the whole disc will be played repeatedly.

Using Fast Forward and Reverse

1. Press simultaneously both (+) and (-) sides of the button ② "MANU" ⑥ will appear on the display. At this time the display will show the amount of elapsed disc play time.



2. Press the (+) side of button ② for fast forward, and the (-) side for reverse.
- Sound is output during fast forward and reverse operations.
- When a disc in which there are several seconds between tracks is used, the amount of elapsed disc-play time is shown, for example, as -0°02 and -0°01.

2/4-speaker system**External 4 channel amp system**

6. SPECIFICATIONS

General (DEH-770, 760/UC, DEH-85/US)

Power source	14.4 V DC (10.8–15.6 V allowable)
Grounding system	Negative type
Max. current consumption	5.5 A
Dimensions (chassis)	178 (W) × 50 (H) × 155 (D) mm [7 (W) × 2 (H) × 6-1/8 (D) in.]
(nose)	170 (W) × 46 (H) × 14 (D) mm [6-3/4 (W) × 1-3/4 (H) × 1/2 (D) in.]
Weight	1.6 kg (3.5 lbs)

General (DEH-660/UC, DEH-630/US, DEH-610/ES)

Power source	14.4 V DC (10.8–15.6 V allowable)
Grounding system	Negative type
Max. current consumption	5.5 A
Dimensions (chassis)	178 (W) × 50 (H) × 155 (D) mm [7 (W) × 2 (H) × 6-1/8 (D) in.]
(nose)	170 (W) × 46 (H) × 12 (D) mm [6-3/4 (W) × 1-3/4 (H) × 1/2 (D) in.]
Weight	1.6 kg (3.5 lbs)

General (DEH-710/ES)

Power source	14.4 V DC (10.8–15.6 V allowable)
Grounding system	Negative type
Max. current consumption	5.5 A
Dimensions (chassis)	178 (W) × 50 (H) × 155 (D) mm [7 (W) × 2 (H) × 6-1/8 (D) in.]
(nose)	170 (W) × 46 (H) × 14 (D) mm [6-3/4 (W) × 1-3/4 (H) × 1/2 (D) in.]
Weight	1.6 kg

General (DEH-770SDK, 760SDK/WG, DEH-770, 760/EW)

Power source	14.4 V DC (10.8–15.6 V allowable)
Grounding system	Negative type
Max. current consumption	5.5 A
Dimensions (chassis)	180 (W) × 50 (H) × 155 (D) mm [7-1/2 (W) × 2 (H) × 6-1/8 (D) mm]
(front face)	188 (W) × 58 (H) × 14 (D) mm
Weight	1.6 kg

Amplifier (UC, US model)

Continuous power output is 10 W per channel min. into 4 Ω, both channels driven 50 to 15,000 Hz with no more than 5% THD.	
Max. power output	25 W + 25 W (EIAJ)
Load impedance	4 Ω (4–8 Ω allowable)
Max. output level/output impedance	
(pre out)	500 mV/1 kΩ
Tone controls (bass)	± 10 dB (100 Hz)
(treble)	± 10 dB (10 kHz)
Loudness contour	+ 12 dB (100 Hz), + 7 dB (10 kHz) (volume: – 30 dB)

Amplifier (ES model)

Max. power output	25 W + 25 W (EIAJ)
Continuous power output	11 W × 2 (1% dist. at 1 kHz)
Continuous power output is 10 W per channel min. into 4 ohms, both channels driven 50 to 15,000 Hz with no more than 5% THD.	
Load impedance	4 Ω (4–8 Ω allowable)
Max. output level/output impedance	
(pre out)	500 mV/1 kΩ
Tone controls (bass)	± 10 dB (100 Hz)
(treble)	± 10 dB (10 kHz)
Loudness contour	+ 12 dB (100 Hz), + 7 dB (10 kHz) (volume: – 30 dB)

Amplifier (WG, EW model)

Max. power output	25 W + 25 W (EIAJ)
Continuous power output	11 W + 11 W (1% dist. at 1 kHz)
Load impedance	4 Ω (4–8 Ω allowable)
Nominal output level/output impedance	
(pre out)	500mV/1kΩ
Tone controls (bass)	± 10 dB (100 Hz)
(treble)	± 10 dB (10 kHz)
Loudness contour	+ 12 dB (100 Hz), + 7 dB (10 kHz) (volume: – 30 dB)

CD player (UC, US model)

System	Compact disc audio system
Usable discs	Compact disc
Signal format	Sampling frequency: 44.1 kHz Number of quantization bits: 16; linear
Frequency characteristics	5–20,000 Hz (± 1 dB)
Signal-to-noise ratio	94dB(1 kHz) (IHF-A network)
Dynamic range	90 dB (1 kHz)
Number of channels	2 (stereo)

CD player (WG, EW, ES model)

System	Compact disc audio system
Usable discs	Compact disc
Signal format	Sampling frequency: 44.1 kHz Number of quantization bits: 16; linear
Frequency characteristics	5–20,000 Hz (± 1 dB)
Signal-to-noise ratio	94 dB (1 kHz) (IEC-A network)
Dynamic range	90dB(1 kHz)
Number of channels	2 (stereo)

FM tuner (UC, US model)

Frequency range	87.9–107.9 MHz
Usable sensitivity	11 dBf (1.0 μV/75 Ω, mono, S/N: 30 dB)
50 dB quieting sensitivity	16 dBf (1.7 μV/75 Ω, mono)
Signal-to-noise ratio	70 dB (IHF-A network)
Distortion	0.3% (at 65 dBf, 1 kHz, stereo)
Frequency response	30–15,000 Hz (± 3 dB)
Stereo separation	40 dB (at 65 dBf, 1 kHz)
Selectivity	70 dB (2ACA) (± 400 kHz)
Three-signal intermodulation (desire signal level)	50 dBf (two undesire signal level: 110 dBf)

Three-signal intermodulation

(desire signal level) (DEH-630/US)	55 dBf (two undesire signal level: 110 dBf)
------------------------------------	--

AM tuner (UC, US model)

Frequency range	530–1,710 kHz
Usable sensitivity	18 μV (25 dB) (S/N: 20 dB)
Selectivity	50 dB (± 10 kHz)

MW tuner (WG, EW model)

Frequency range	531–1,602 kHz
Usable sensitivity	18 μV (25 dB) (S/N: 20 dB)
Selectivity	50 dB (± 9 kHz)

LW tuner (WG, EW model)

Frequency range	153–281 kHz
Usable sensitivity	30 μV (30 dB) (S/N: 20 dB)
Selectivity	50 dB (± 9 kHz)

FM tuner (WG, EW, ES model)

Frequency range	87.5–108 MHz
Usable sensitivity	11 dBf (1.0 μV/75 Ω, mono, S/N: 30 dB)
50 dB quieting sensitivity	16 dBf (1.7 μV/75 Ω, mono)
Signal-to-noise ratio	70 dB (IEC-A network)
Distortion	0.3% (at 65 dBf, 1 kHz, stereo)
Frequency response	30–15,000 Hz (± 3 dB)
Stereo separation	40 dB (at 65 dBf, 1 kHz)

AM tuner (ES model)

Frequency range	531–1,602 kHz (9 kHz)
Usable sensitivity	530–1,710 kHz (10 kHz)
Selectivity	18 μV (25 dB) (S/N: 20 dB)
	50 dB (± 9 kHz)
	50 dB (± 10 kHz)

These specifications were determined and are presented in accordance with specification standards established by the Ad Hoc Committee of Car Stereo Manufacturers.

Note:

Specifications and the design are subject to possible modification without notice due to improvements.

7. DISASSEMBLY

● Removing the Case

1. Insert and turn a flat screwdriver to remove the case.
2. Raise the case to remove.

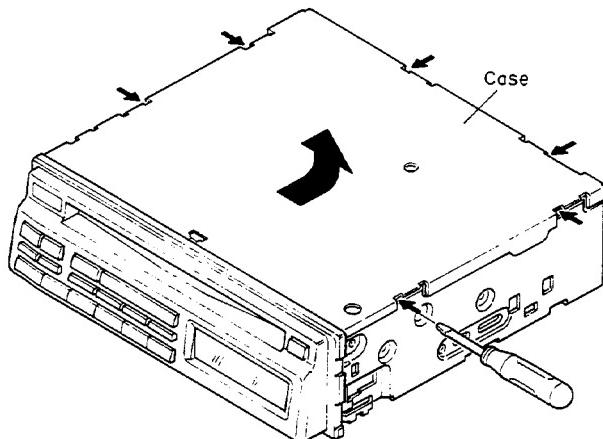


Fig. 1

● Removing the Grille Assy (DEH-660/UC, 630/US, 610/ES)

1. Press the tabs at three locations indicated by arrows, and then pull out the grille assy.
2. Disconnect the connector.

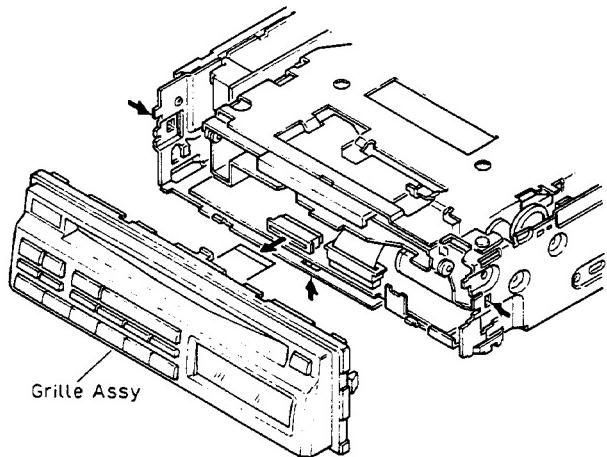


Fig. 2-2

● Removing the Grille Assy

(DEH-770/UC, EW, 760/UC, EW, 85/US, 710/ES, 770SDK, 760SDK/WG)

1. Press the tabs at three locations indicated by arrows, and then pull out the grille assy.
2. Disconnect the two connectors.

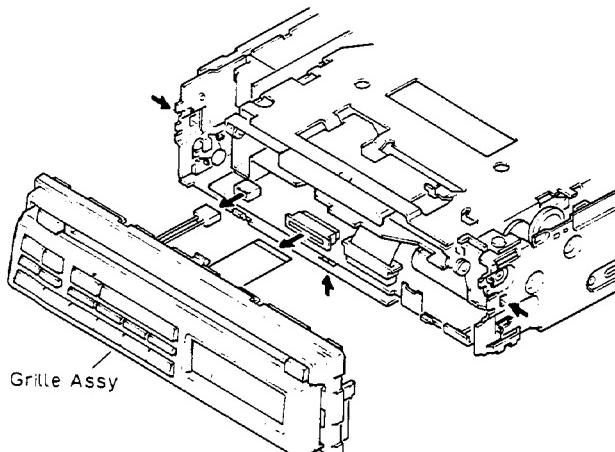


Fig. 2-1

● Removing the Display Unit

(DEH-770/US, EW, 760/UC, EW, 85/US, 710/ES, 770SDK, 760SDK/WG)

1. Remove the four screws, and then remove the grille.
2. Pull out the display Unit.

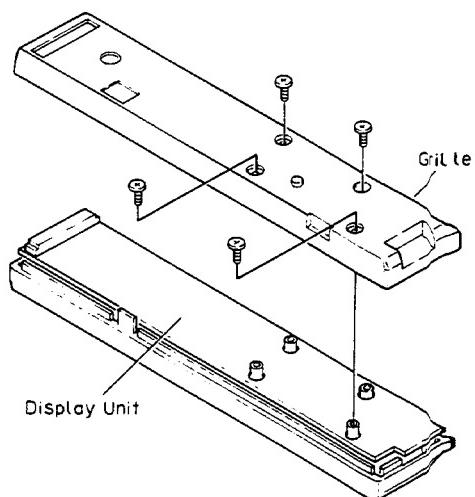


Fig. 3

● Removing the CD Mechanism Unit

1. Remove the four screws.
2. Disconnect the two connectors, and then remove the CD mechanism Unit.

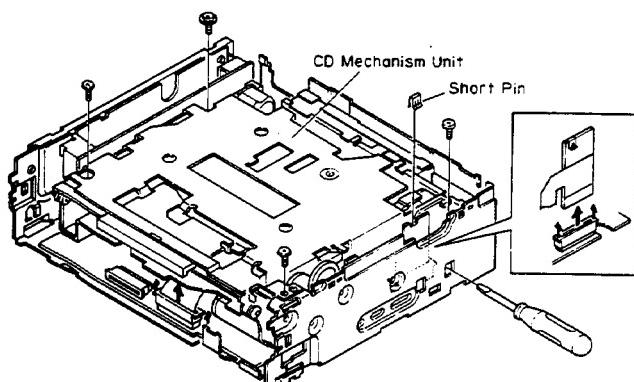


Fig. 4

NOTE: When remove the flexible p.c. board, always insert a shorting pin or insert an inter-pattern short (jumper) before disconnecting the flexible p.c. board from the connector.

● Removing the CD Tuner Unit

1. Remove the screw D, and then remove the holder.
2. Remove the screw E and F.
3. Remove the screw G, and then remove the holder.
4. Unbend the tabs at five locations indicated by arrows until straight.
5. Raise up on CD tuner unit to remove it from chassis unit.

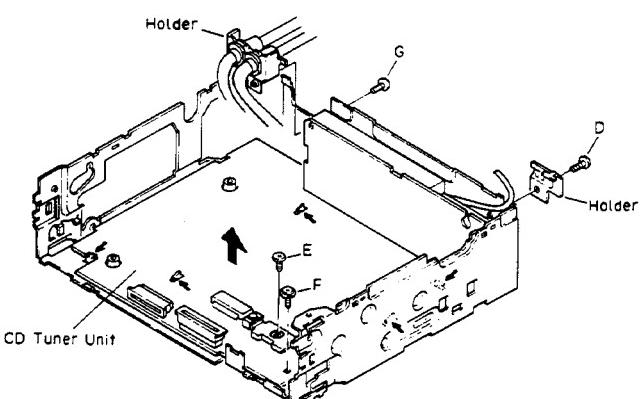


Fig. 6

● Removing the Amp Unit

1. Remove the four screws A, and the four screws B.
2. Remove the amp unit.

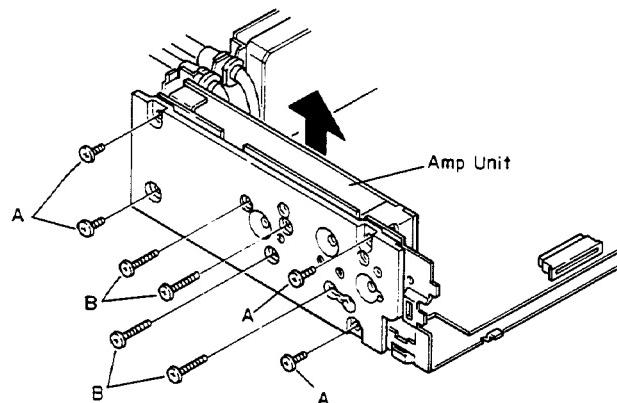


Fig. 5

8. ADJUSTMENT

1) Precautions

• This unit uses a single power supply (+5V) for the regulator. The signal reference potential, therefore, is connected to pin No. 21 (approx. 2.5V) of IC 351 (CXA1081Q) instead of GND. (VC or VREF at test point)

If VC and GND are connected to each other by mistake during adjustments, not only will it be impossible to measure the potential correctly, but the servo will malfunction and a severe shock will be applied to the pick-up. To avoid this, take special note of the following.

Do not connect the negative probe of the measuring equipment to VC and GND together. It is especially important not to connect the channel 1 negative probe of the oscilloscope to VC with the channel 2 negative probe connected to GND.

And since the frame of the measuring instrument is usually at the same potential as the negative probe, change the frame of the measuring instrument to floating status.

If by accident VC comes in contact with GND, immediately switch the regulator or power OFF.

- Always make sure the regulator is OFF when connecting and disconnecting the various filters and wiring required for measurements.
- Before proceeding to further adjustments and measurements after switching regulator ON, let the player run for about one minute to allow the circuits to stabilize.
- Since the protective systems in the unit's software are rendered inoperative in test mode, be very careful to avoid mechanical and /or electrical shocks to the system when making adjustment.

- Test mode starting procedure

Turn ACC and Back-up ON while pressing the VOL+ and VOL- keys together.

- Test mode cancellation

Turn ACC and Back-up OFF and then back ON.

- Disc detection during loading and eject operations is performed by means of a photo transistor in this unit. Consequently, if the inside of the unit is exposed to a strong light source when the outer casing is removed for repairs or adjustment, the following malfunctions may occur.

*During PLAY, even if the eject button is pressed, the disc will not be ejected and the unit will remain in the PLAY mode.

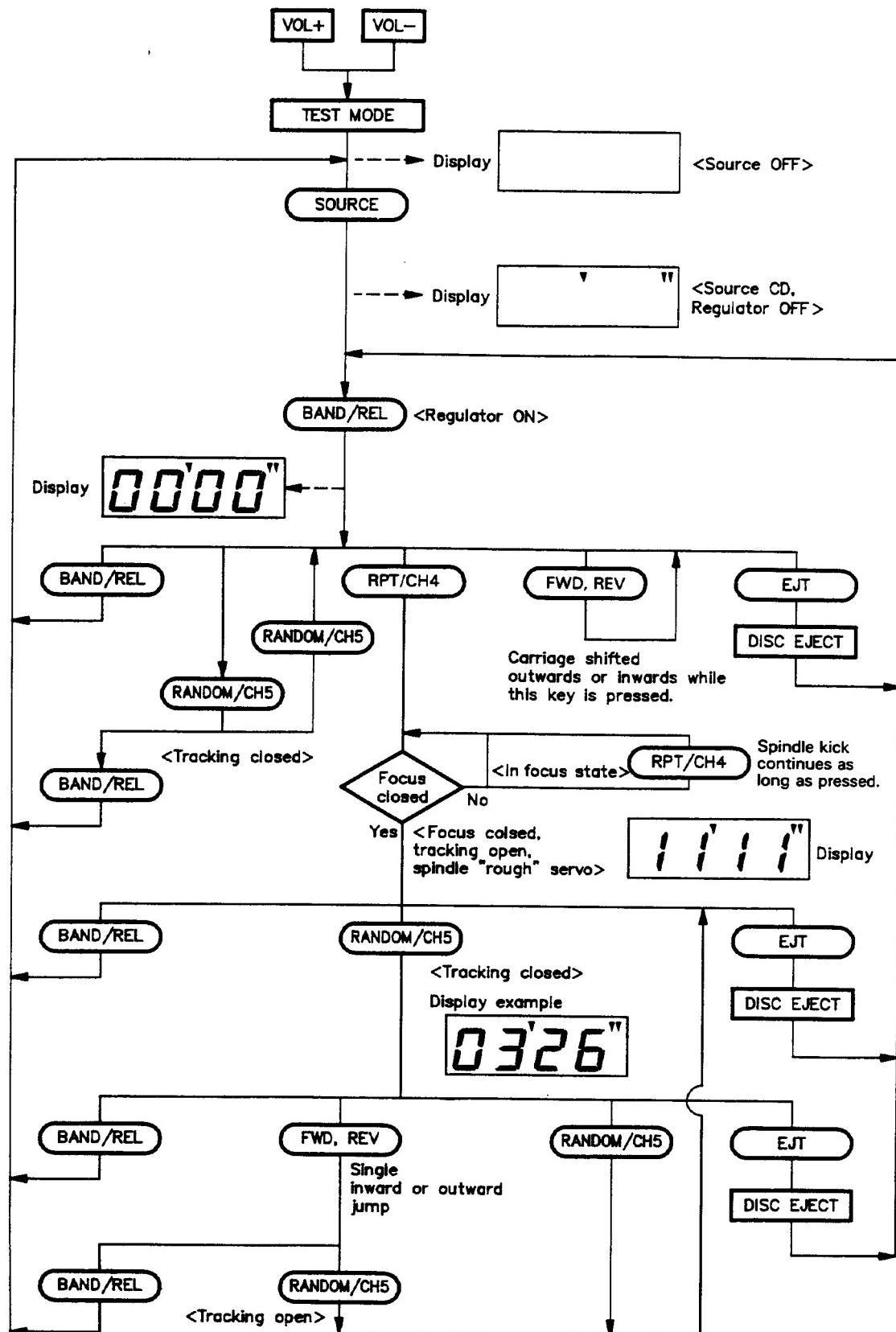
*The unit will not load a disc.

When the unit malfunctions this way, either re-position the light source, move the unit or cover the photo transistor.

Key	Function
BAND	Regulator ON/OFF
FWD	FWD Kick
REV	REV Kick

Key	Function
RANDOM/CH5	Tracking close
RANDOM/CH5	Tracking open
RPT/CH4	Focus close

• Flow Chart



2) Adjustment Point

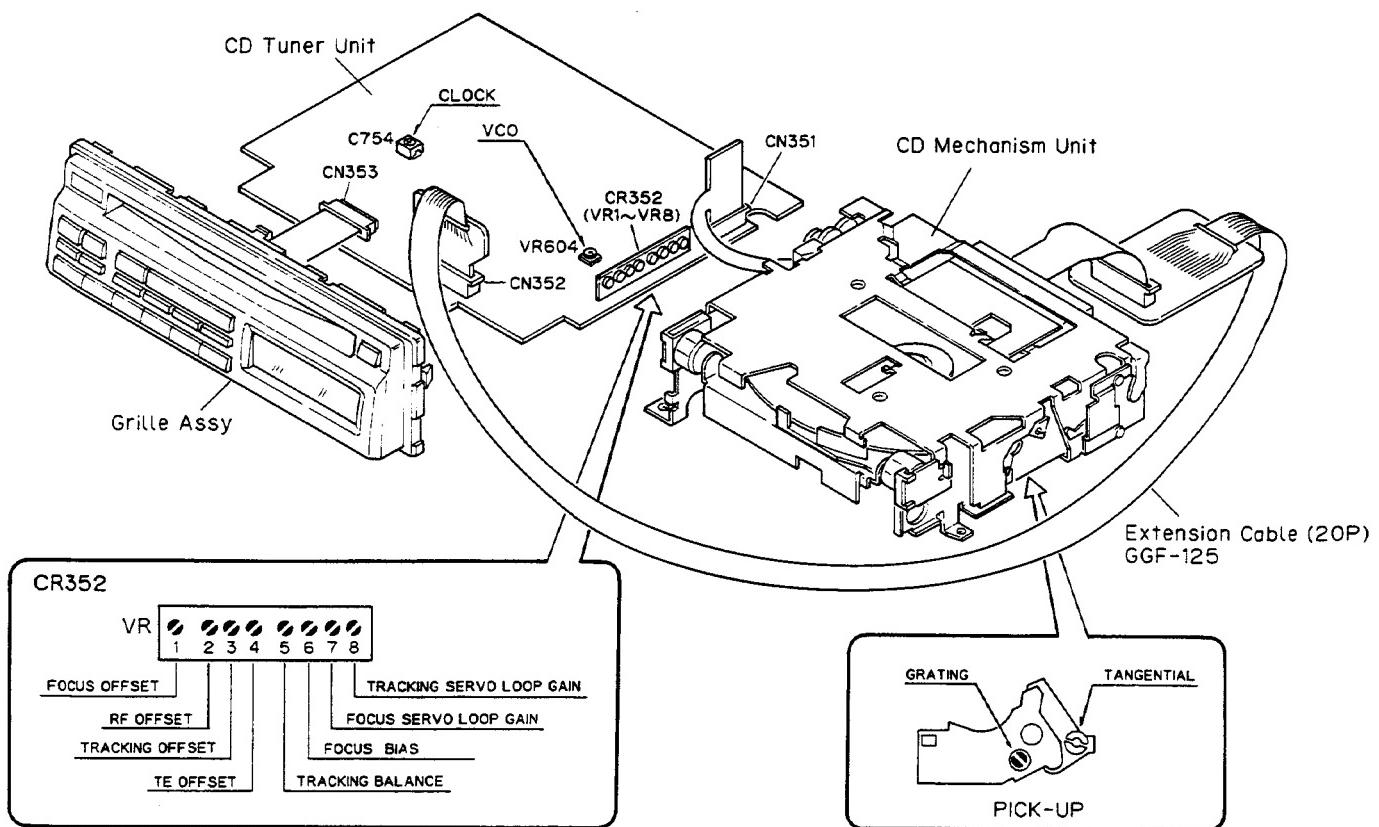
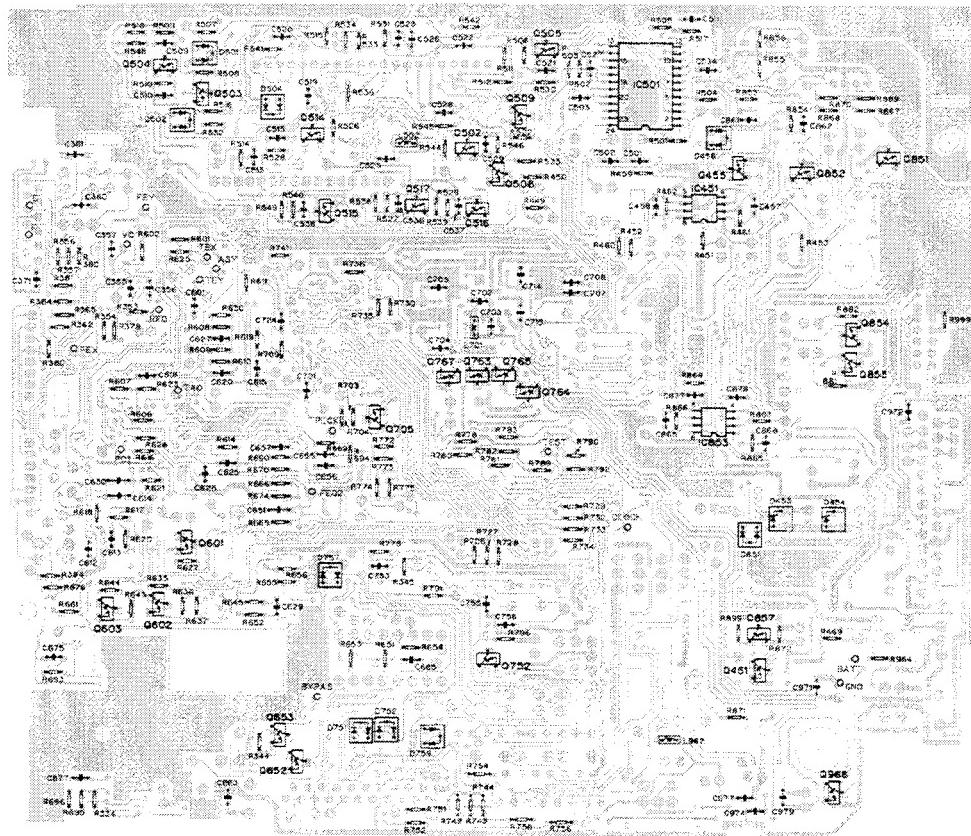


Fig. 7

- Test Point
CD Tuner Unit (Foil side)



CD Tuner Unit (Parts mounted side)

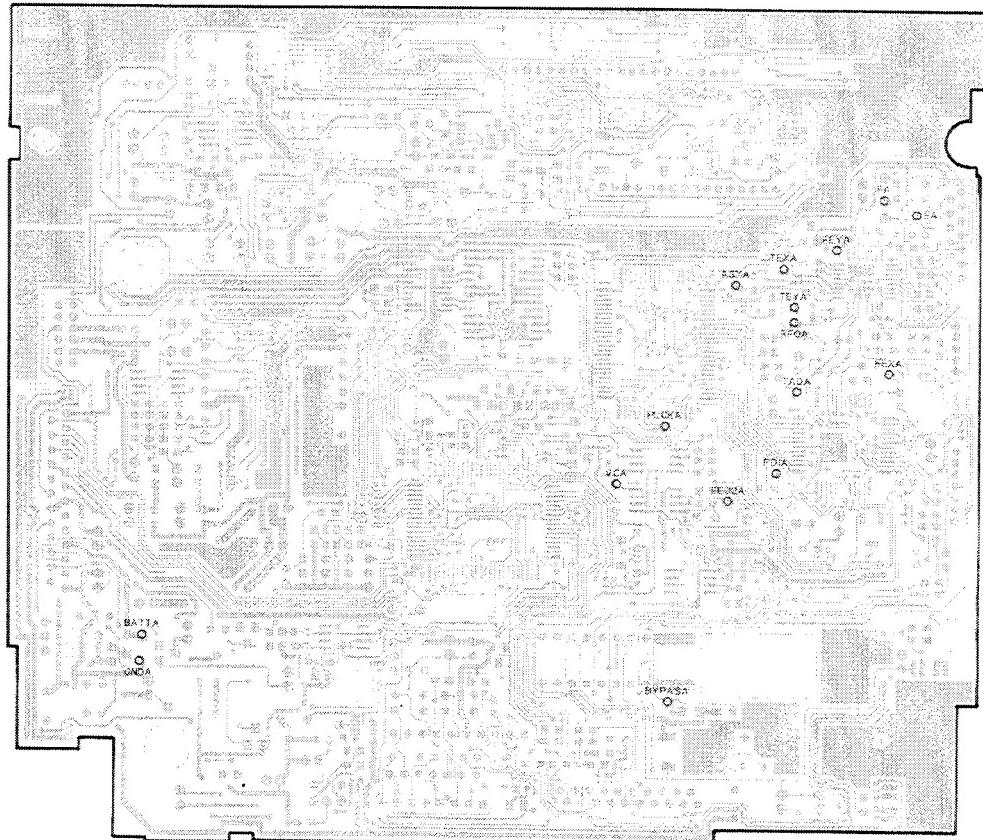


Fig. 8

8.1 Focus Offset Adjustment

● Purpose: To adjust the electrical offset of the focus amplifier to zero.

● Maladjustment symptoms: No focus closing

● Measuring equipment/ jigs	• Multi-meter or oscilloscope
● Measuring point	• FE02
● Test disc and setting	• No Disc • Test mode
● Adjustment position	• VR1

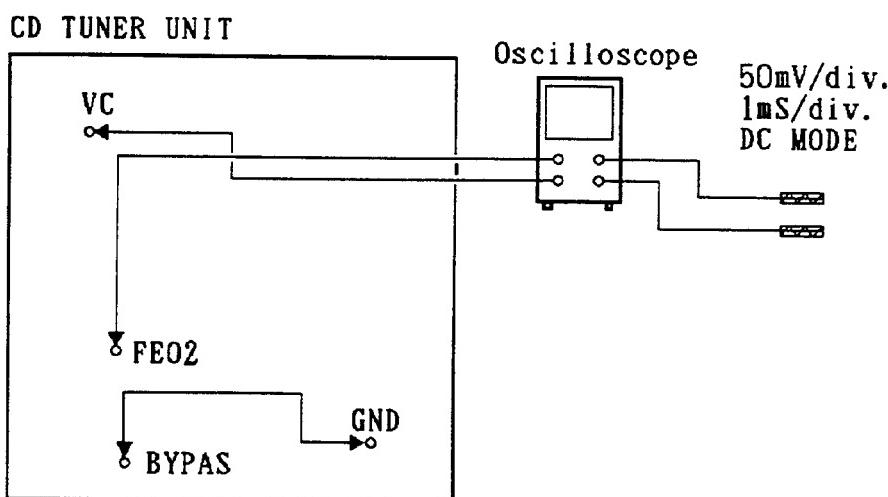


Fig. 9

(This P.C. Board connection diagram is viewed from the foil side.)

Adjustment Procedure

1. Connect BYPAS to GND.
2. Switch regulator ON.
3. Using VR1, adjust the FE02 DC voltage in reference to VC to a value of $0 \pm 25\text{mV}$.

8.2 VCO Free Run Frequency Adjustment

- Purpose: To adjust the EFM decoder reference clock free-run frequency to a suitable value.
- Maladjustment symptoms: Spindle lock not possible, distorted sound or no sound at all.

● Measuring equipment/jigs	• Frequency counter
● Measuring point	• Pin No. 70 (PLCK) of IC701 (CXD11670)
● Test disc and setting	• No Disc • Test mode
● Adjustment position	• VR604

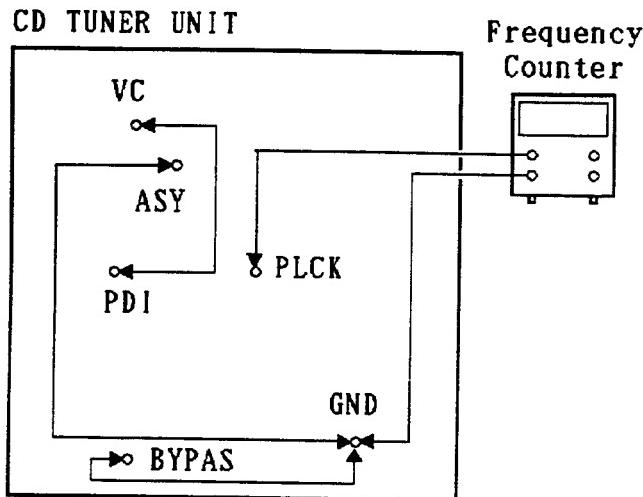


Fig. 10

Adjustment Procedure

1. Connect pin No. 7 (TP ASY) of IC351 to GND.
Connect BYPAS to GND.
 2. Connect pin No. 1 (TP VC) of IC601 to pin No. 28 (TP PDI).
 3. Switch regulator ON while in test mode.
 4. Connect the frequency counter to pin No. 70 (TP PLCK) of IC701 (CXD11670).
 5. Adjust VR604 to obtain a frequency of $4.45 \pm 0.01\text{MHz}$.
 6. Switch regulator OFF.
 7. Disconnect the leads connecting TP VC to TP PDI, and TP ASY to GND.
- Note: Connect TP VC and TP PDI with leads kept as short as possible.
Note: Connect the frequency counter ground to TP GND as shown in the figure.

8. 3 RF Offset Adjustment

● Purpose: To adjust the RF amplifier offset to a suitable value

● Maladjustment symptoms: Focus closure fails readily

● Measuring equipment/jigs	• Oscilloscope
● Measuring point	• RFO
● Test disc and setting	• No Disc • Test mode
● Adjustment position	• VR2 (RFO)

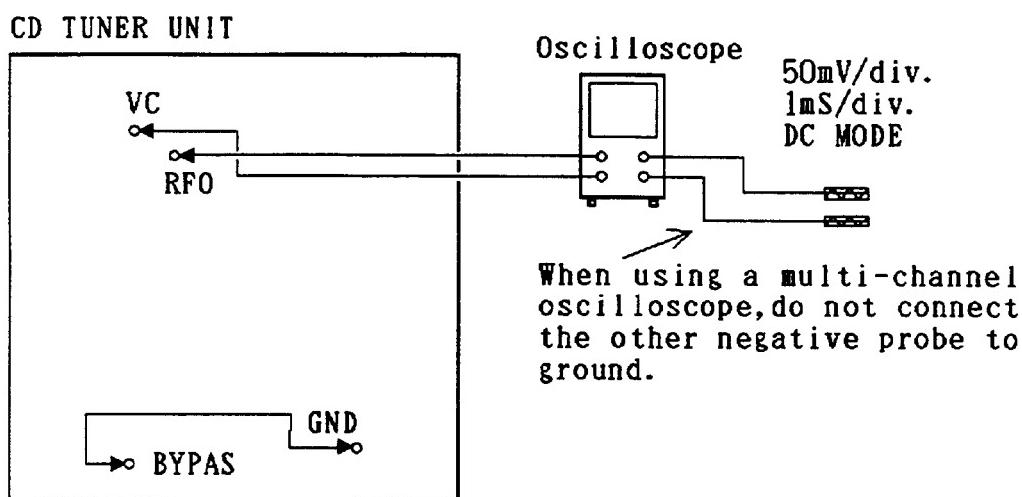


Fig. 11

Adjustment Procedure

1. Connect BYPAS to GND.
2. Switch regulator ON.
3. Using the oscilloscope, measure the RFO DC voltage in reference to VC, and adjust VR2 (RFO) to obtain a reading of $+40 \pm 10\text{mV}$.

8.4 Tracking Offset Adjustment

- Purpose: To adjust the electrical offset of the tracking amplifier to zero
- Maladjustment symptoms: Search times too long, carriage run-away

● Measuring equipment/jigs	• Oscilloscope
● Measuring point	• TAO low-pass filter output
● Test disc and setting	• No Disc • Test mode
● Adjustment position	• VR3(T0)

CD TUNER UNIT

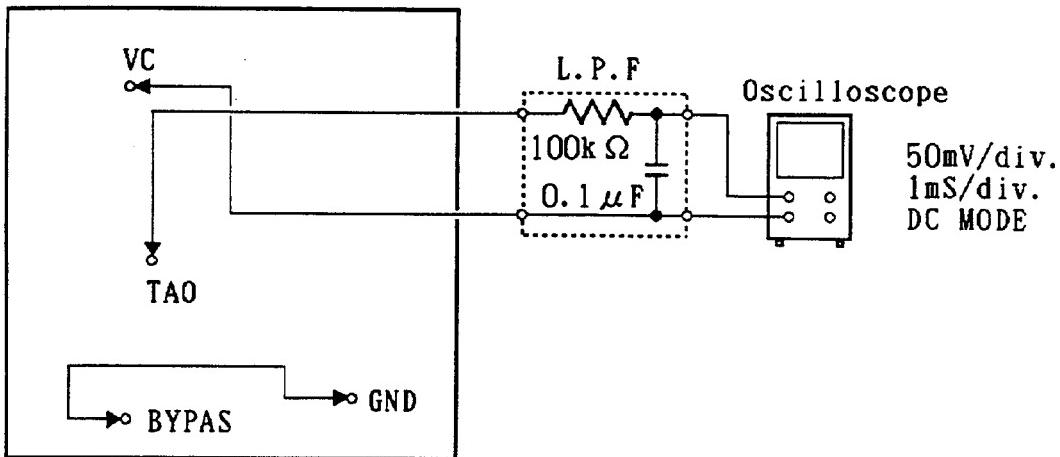


Fig. 12

Adjustment Procedure

1. Insert a low-pass filter between TAO and VC.
 2. Check that BYPAS is connected to GND.
 3. Switch regulator ON.
 4. Using the oscilloscope, measure the TAO LPF output DC voltage in reference to VC, and adjust VR3(T0) to obtain a reading of $0 \pm 25\text{mV}$.
- The low-pass filter may be left in place for later adjustments.

8. 5 TE Offset Adjustment - I

● Purpose: To adjust the electrical offset of the tracking servo to zero.

● Maladjustment symptoms: Search times too long, carriage run-away

● Measuring equipment/jigs	• DC voltmeter
● Measuring point	• TAO low-pass filter output
● Test disc and setting	• No Disc • Test mode
● Adjustment position	• VR4(TEO)

CD TUNER UNIT

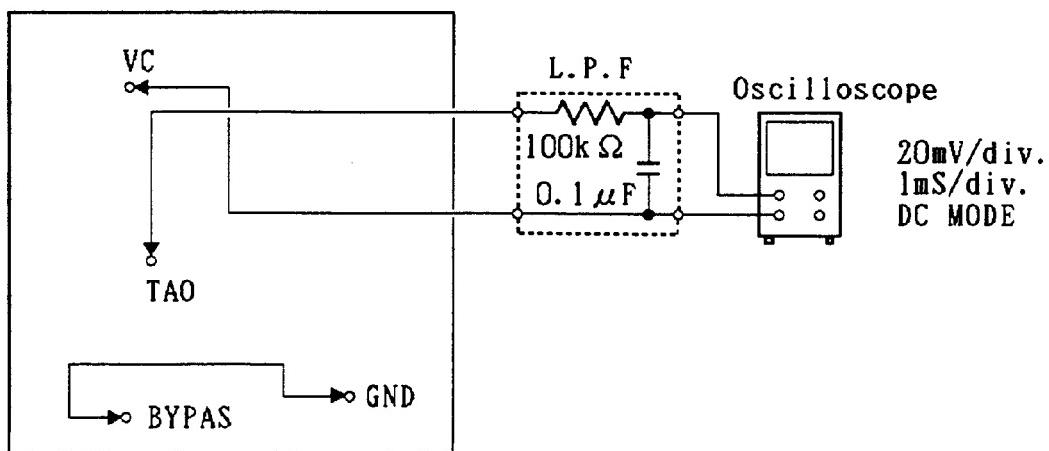


Fig. 13

Adjustment Procedure

1. Check that BYPAS is connected to GND.
2. Switch regulator ON while in test mode.
3. Press the RANDOM/CH5 key to close tracking.
4. Using VR4(TEO), adjust the TAO LPF output DC voltage in reference to VC to a value of $0 \pm 10\text{mV}$.
5. Switch regulator OFF.

8. 6 Tracking Balance Adjustment - I

- Purpose: To adjust the tracking servo offset to zero.
- Maladjustment symptoms: Search times too long, poor playability, carriage run-away

● Measuring equipment/jigs	• Oscilloscope
● Measuring point	• TEY (Tracking error signal), low-pass filter output
● Test disc and setting	• SONY TYPE 4 (or TYPE 3)
● Adjustment position	• VR5 (T. BAL) • Test mode

CD TUNER UNIT

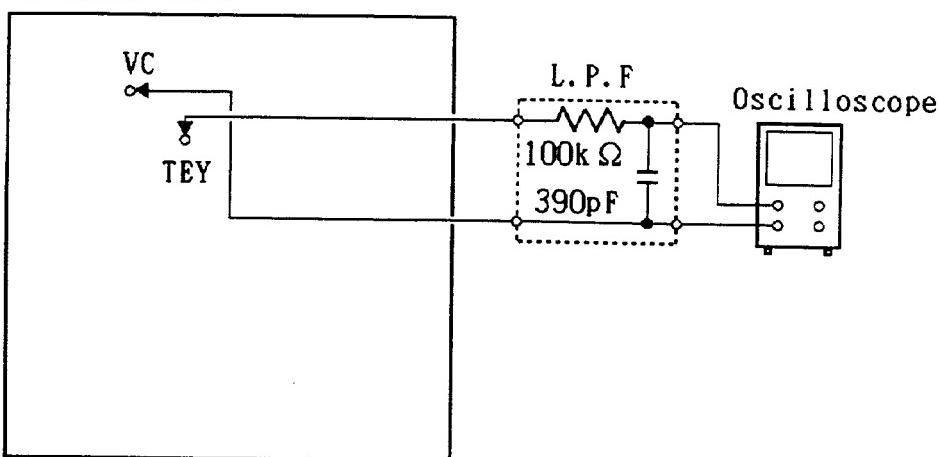


Fig. 14

Adjustment Procedure

1. After checking that regulator is OFF, connect the low-pass filter as shown in the diagram.
 2. Disconnect BYPAS from ground.
 3. Set the test disc (SONY TYPE 4). Switch regulator ON.
 4. Using the FWD or REV key, move the pick-up to about the center of the signal surface.
 5. Press the RPT/CH4 key to close focus.
 6. Using an oscilloscope, observe the TEY signal in respect to VC. Then adjust VR5 (T. BAL) to set the positive and negative amplitudes to the same levels. (See Fig. 15-17)
 7. Switch the power OFF.
- The low-pass filter may be left in place for later adjustments.

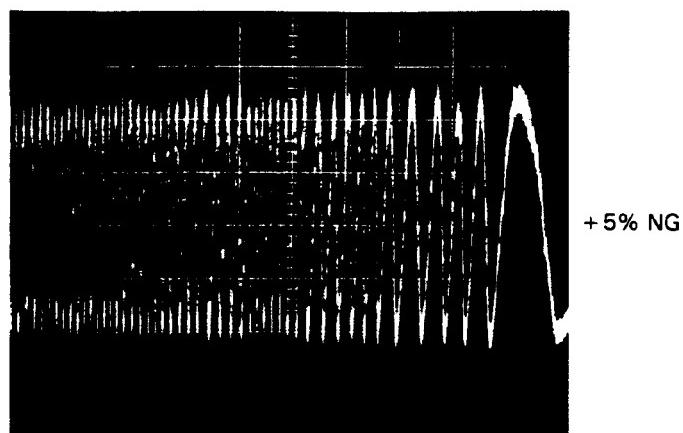


Fig. 15

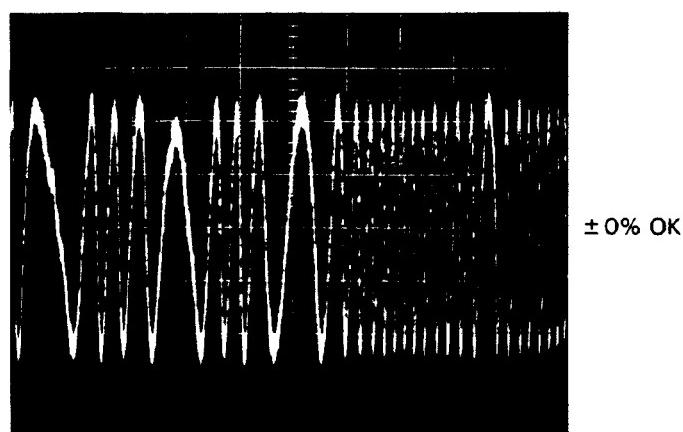


Fig. 16

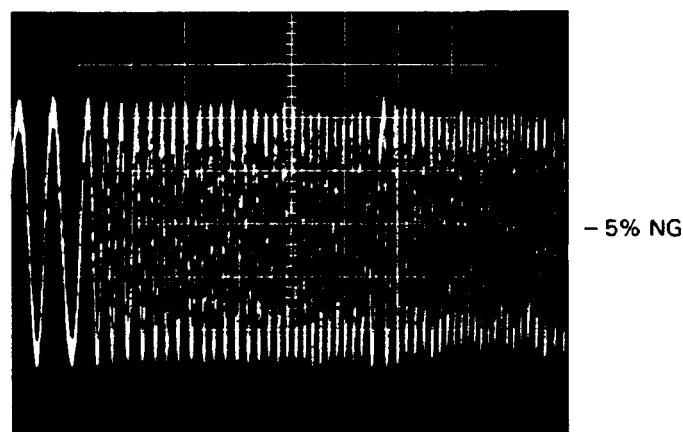


Fig. 17

10ms/div.
0.2V/div.
DC Mode

8.7 Tangential Skew Check

- Purpose: To check whether tangential skew has been misaligned or not when replacing the pick-up unit.
- Maladjustment symptoms: No disc playback; track jumping

● Measuring equipment/jigs	• Oscilloscope, screwdriver
● Measuring point	• RFO
● Test disc and setting	• SONY TYPE 4 (or TYPE 3)
● Adjustment position	• Normal mode • Pick-up tangential adjustment screw

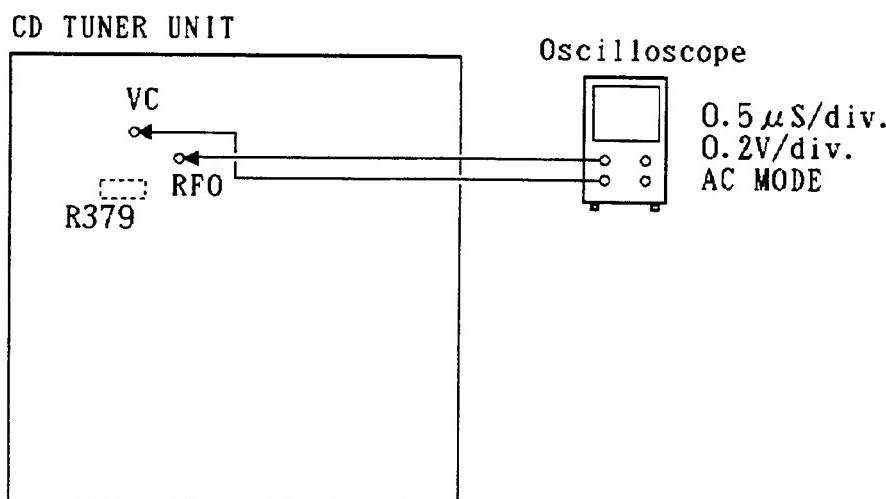
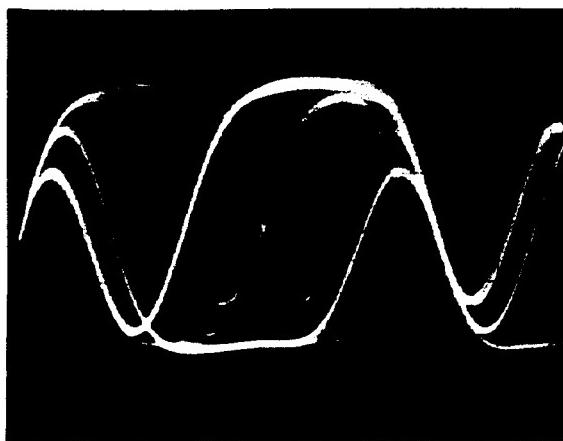


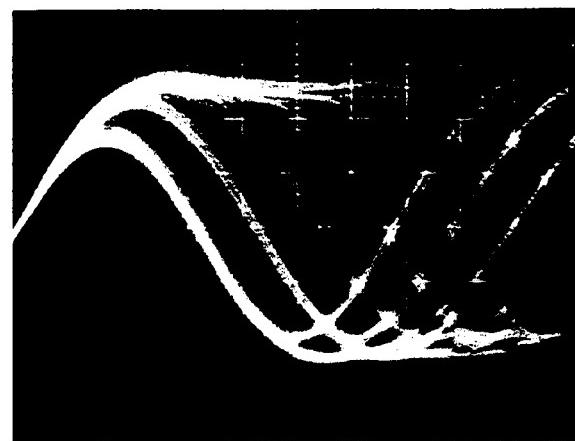
Fig.18

Adjustment Procedure (with R379 removed)

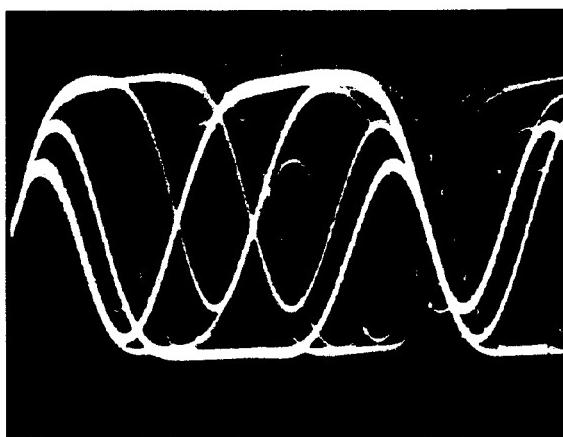
1. Remove R379 (but reconnect after completing adjustment).
2. Play tune TNO 7 in normal mode. (TYPE 3:TNO 23)
3. Check that the valley at the 11T section of the RF waveform is flat.
4. If out of adjustment, readjust to obtain a flat RF waveform. (See Fig. 19-24) Take care not to knock the pick-up with the screwdriver at this stage. (This kind of accident can result in loss of focus.)
5. Switch the power OFF and reconnect R379.
6. Apply "screw-lock" to the tangential adjustment screw.
7. After adjusting tangential skew, also adjust the grating.
8. If tangential skew is seriously out of adjustment, carriage stopping and run-away tend to occur in normal mode. In this case,
 - a) Switch to test mode,
 - b) Shift the pick-up to signal surface center using FWD or REV key,
 - c) Press the RPT/CH4 key to close focus,
 - d) Press the RANDOM/CH5 key to close tracking,
 - e) Observe RFO in respect to VC, and turn the tangential adjustment screw to obtain a flat waveform at the 11T section,
 - f) Repeat the adjustment resuming from step 2.



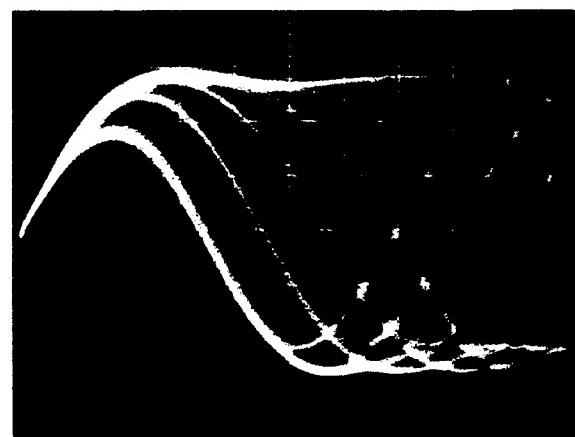
NG Fig. 19



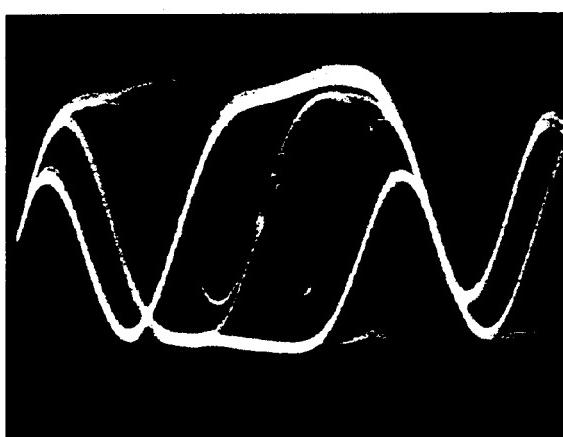
NG Fig. 20



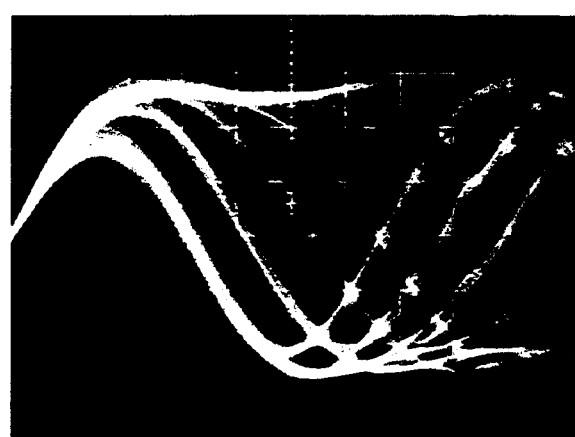
OK Fig. 21



OK Fig. 22



NG Fig. 23



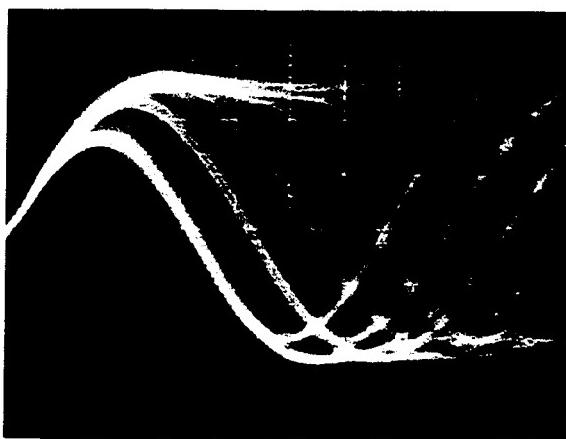
NG Fig. 24

Play tune TNO 7 (TYPE4)

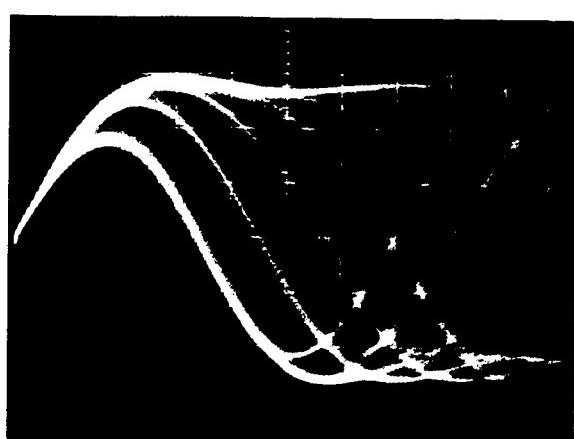
Play tune TNO 12 (TYPE4)

Adjustment Procedure (without R379 removed)

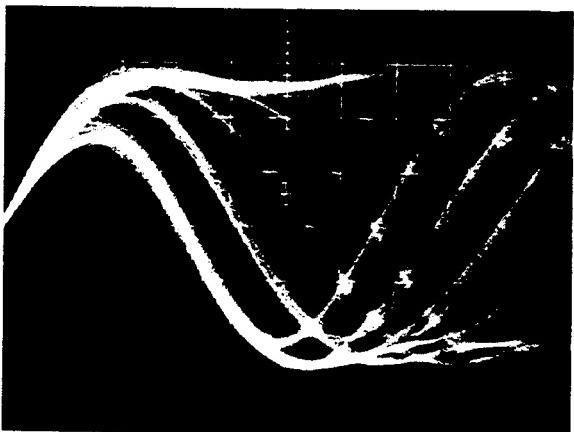
1. Play tune TNO 12 in normal mode. (TYPE 3:TNO 14)
2. Turn the tangential adjustment screw to obtain a good RF waveform eye pattern. Turn the adjustment screw both clockwise and counterclockwise to points where the eye pattern deteriorates, and take the midway point as the adjustment point. As a general guide, look for an overall clear waveform, and one of the diamond shapes in the eye pattern. The diamond shapes should appear in fine lines at the point of optimum adjustment. Take care not to knock the pick-up with the screwdriver at this stage. (This kind of accident can result in loss of focus.) (See Fig. 25-27)
3. Apply "screw-lock" to the tangential adjustment screw.
4. After adjusting tangential skew, also adjust the grating.



NG Fig. 25



OK Fig. 26



NG Fig. 27

8. 8 Grating Adjustment

● Purpose: The grating may need adjustment in a replaced pick-up assembly.

● Maladjustment symptoms: No disc playback; track jumping

● Measuring equipment/jigs	• Oscilloscope, clock driver, grating adjustment filter (bandpass filter) (GGF-133), AC millivoltmeter, two low-pass filters
● Measuring point	• TEY, E LPF output, F LPF output
● Test disc and setting	• SONY TYPE 4 (or TYPE 3) • Test mode
● Adjustment position	• Pick-up grating adjustment hole

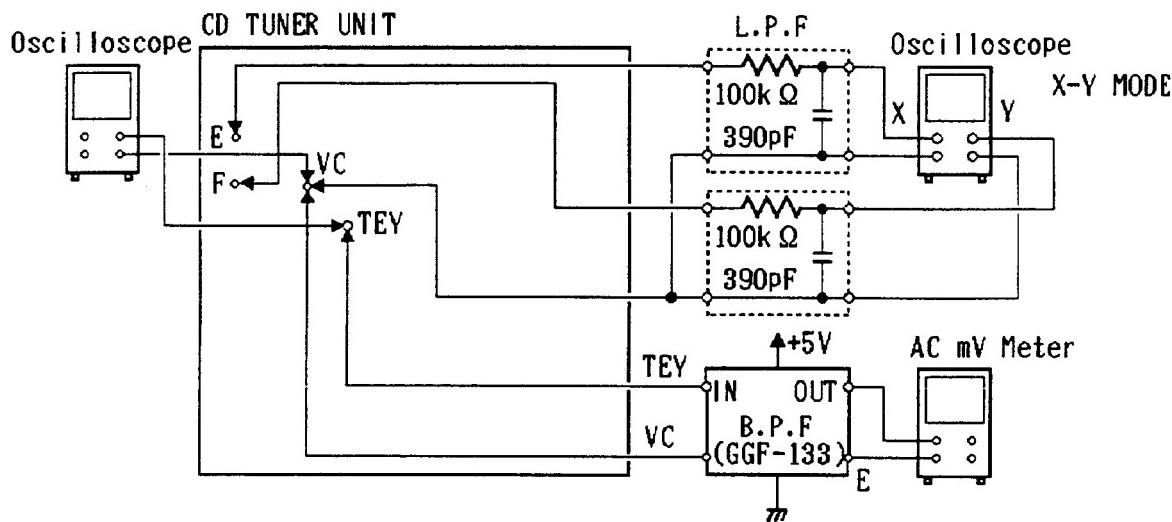


Fig. 28

Adjustment Procedure

1. Connect a low-pass filter (100k, 390p) to test points E, F, and VC as shown in the above diagram.
2. Switch regulator ON in test mode, and load a disc.
3. Press the RPT/CH4 key to close focus.
4. Press the RANDOM/CH5 key to close tracking.
5. Using the FWD or REV key, move the pick-up to about the center of the signal surface (tune TNO 6). (TYPE 3:TNO 7)
6. Press the RANDOM/CH5 key to open tracking.
7. While monitoring the TEY filter output by AC milli-voltmeter, turn the grating adjustment hole slowly. The AC voltage increases and decreases while turning the screw. Search for the minimum voltage level. (This corresponds to the position where the grating is on a track, and is referred to as the null point.)
8. Then while monitoring TEY by oscilloscope, turn the driver slowly clockwise from the null point (as seen from under the pick-up) until the first waveform peak amplitude is reached. (See Fig. 30-35)

9. With the E low-pass filter output connected to the X axis of the oscilloscope, and the F low-pass filter output connected to the Y axis, apply an input in AC mode and observe the Lissajous figures.
10. Using the driver, adjust the Lissajous figure to a single line (or as close as possible)
11. Switch regulator OFF and remove the filters.

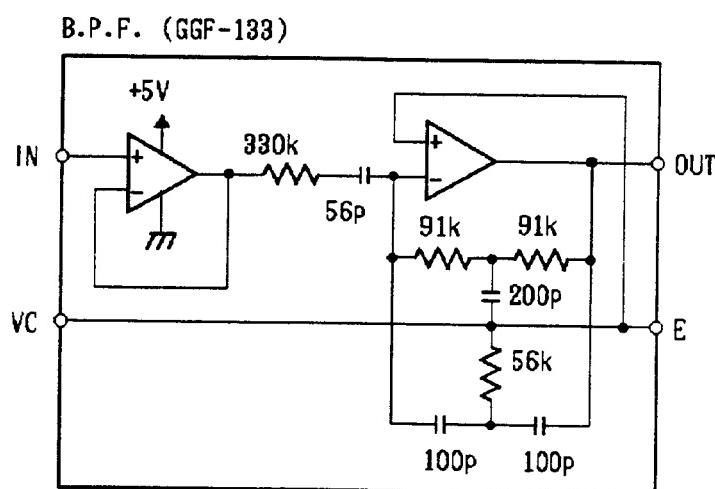


Fig. 29

TEY waveform 10ms/div, 500mV/div

Null Point

Lissajous figure (AC input)
Horizontal axis E 20mV/div
Vertical axis F 20mV/div



Fig. 30

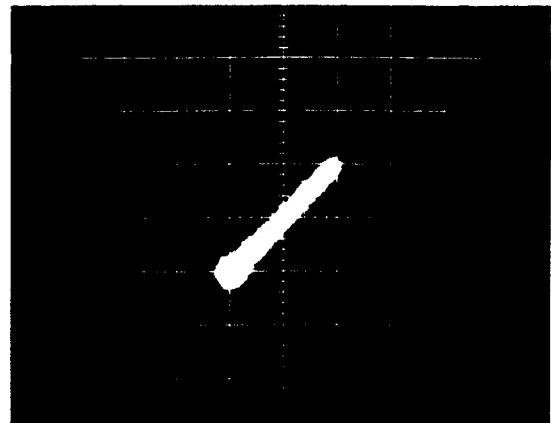


Fig. 31

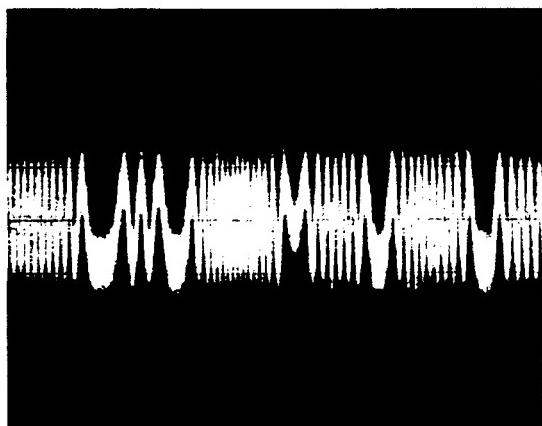
**"Rough" adjustment**

Fig. 32

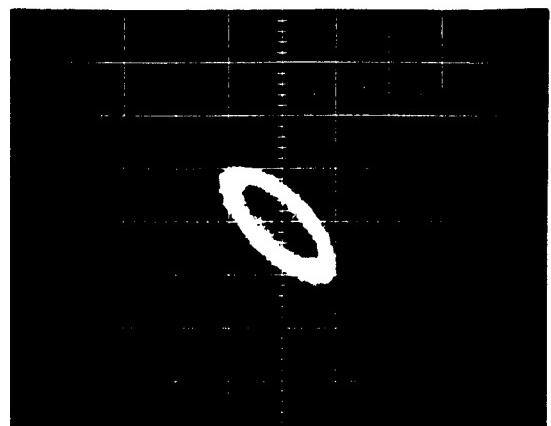


Fig. 33

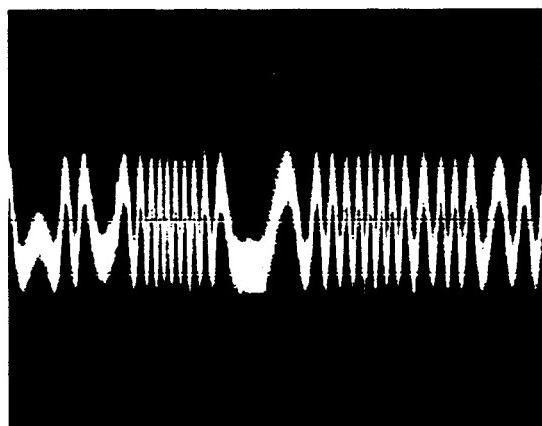
**Final adjustment**

Fig. 34

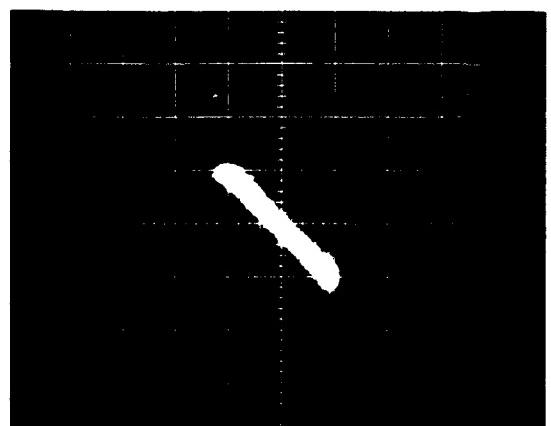


Fig. 35

8.9 Focus Bias Adjustment

- Purpose: To adjust the focus servo bias to an optimum value
- Maladjustment symptoms: Focus closing difficulty, poor playability

● Measuring equipment/jigs	• Oscilloscope
● Measuring point	• RFO
● Test disc and setting	• SONY TYPE 4 (or TYPE 3)
● Adjustment position	• VR6 (FEB) • Normal mode

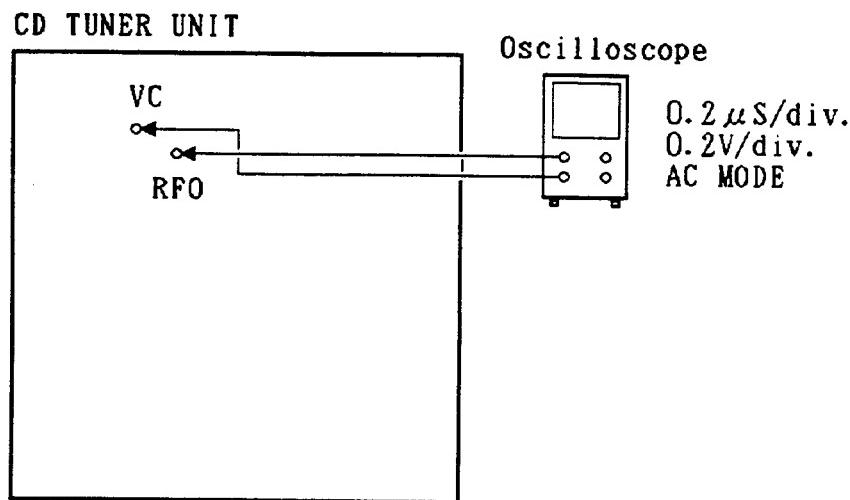
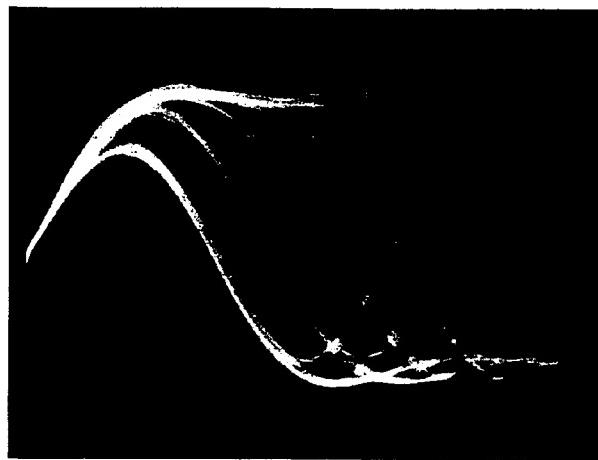


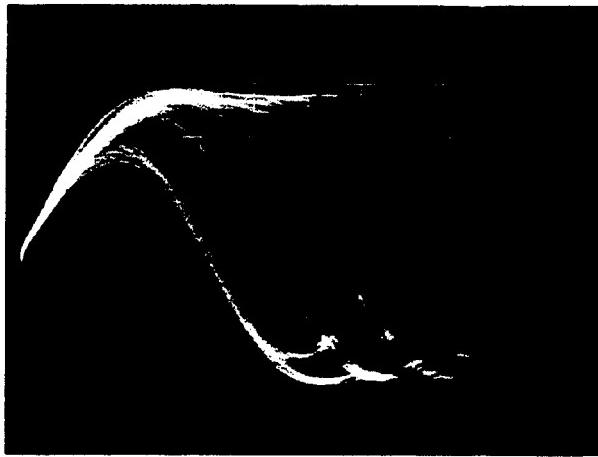
Fig. 36

Adjustment Procedure

1. Play tune TNO 12 in normal mode. (TYPE 3:TNO 14)
2. Observe RFO in respect to VC in the oscilloscope, and adjust VR6(FEB) to obtain maximum RF and optimum eye pattern. (See Fig. 37 and 38)



OK Fig. 37



0.2 μ s/div. Before adjustment Fig. 38
0.2V/div.
AC Mode

8.10 Focus Servo Loop Gain Adjustment

- Purpose: To adjust the focus servo loop gain to an optimum value
 - Maladjustment symptoms: Poor playability, reduced resistance to vibration, focus closure fails readily
- | | |
|----------------------------|---|
| ● Measuring equipment/jigs | • Oscillator, gain adjustment filter (GGF-065), dual meter millivoltmeter |
| ● Measuring point | • FEX, FEY |
| ● Test disc and setting | • SONY TYPE 4 (or TYPE 3) • Normal mode |
| ● Adjustment position | • VR7 (FG) |

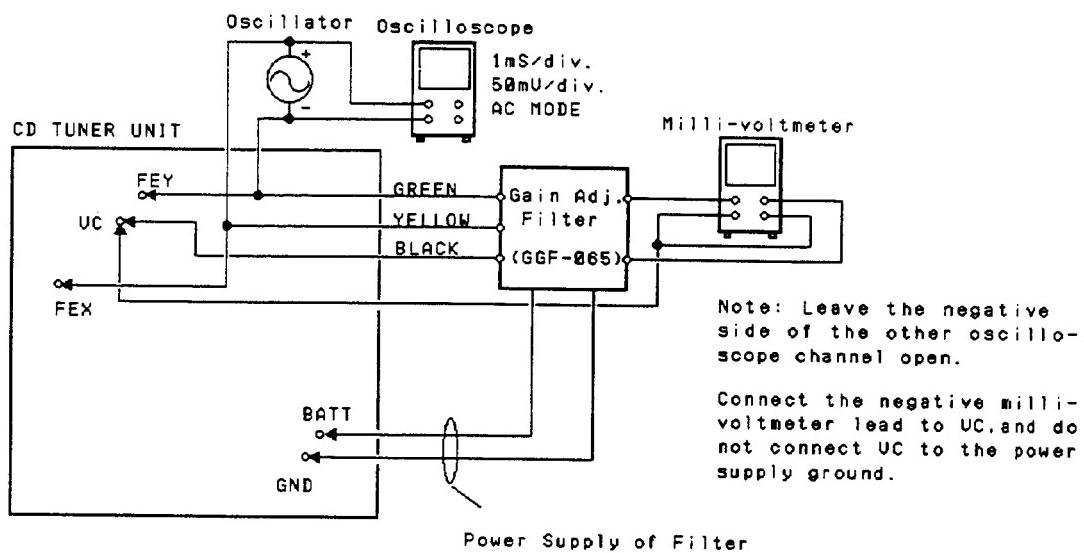


Fig. 39

Adjustment Procedure

1. After checking that the power is OFF, connect the gain adjustment filter and measuring equipment as shown in the above diagram.
2. Play tune TNO 12 in normal mode. (TYPE 3:TNO 14)
3. Set the oscillator to 1kHz, and observe the FEX/FEY output in the oscilloscope. Adjust the oscillator output to obtain a FEX/FEY output of 100mVp-p.
4. Adjust VR7 (FG) to obtain a milli-voltmeter difference of $0 \pm 0.5\text{dB}$.

8. 11 Tracking Servo Loop Gain Adjustment

● Purpose: To adjust the tracking servo loop gain to an optimum value

● Maladjustment symptoms: Poor playability, reduced resistance to vibration

● Measuring equipment/jigs	• Oscillator, gain adjustment filter (GGF-065), dual meter millivoltmeter
● Measuring point	• TEX, TEY
● Test disc and setting	• SONY TYPE 4 (or TYPE 3) • Normal mode
● Adjustment position	• VR8 (TG)

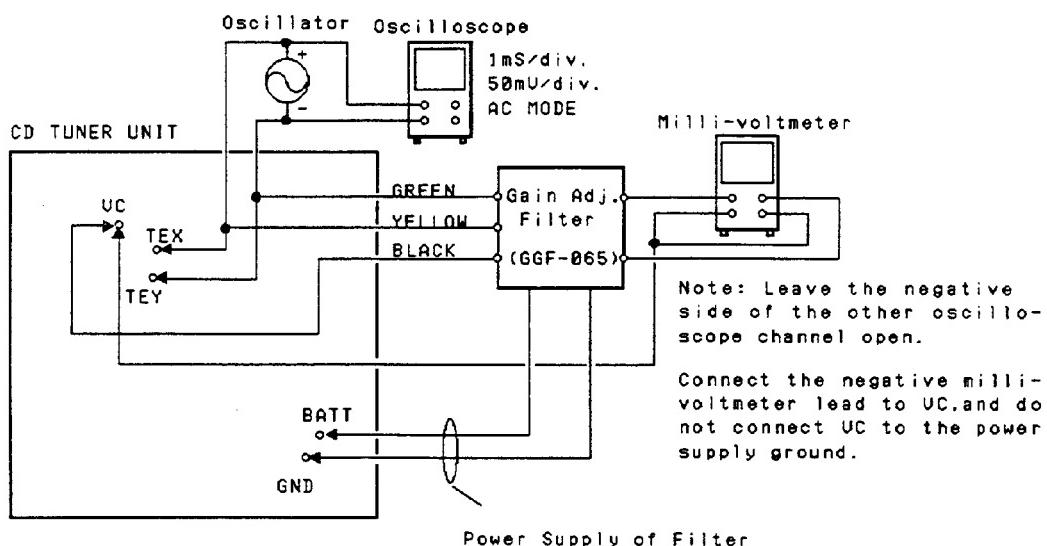


Fig. 40

Adjustment Procedure

1. After checking that the power is OFF, connect the gain adjustment filter and measuring equipment as shown in the above diagram.
2. Play tune TNO 12 in normal mode. (TYPE 3:TNO 14)
3. Set the oscillator to 1.4kHz, and observe the TEX/TEY output in the oscilloscope. Adjust the oscillator output to obtain a TEX/TEY output of 100mVp-p.
4. Adjust VR8 (TG) to obtain a millivoltmeter difference of 0 ± 0.5 dB.

8.12 TE Offset Adjustment-II

● Purpose: To adjust the electrical offset of the tracking servo to zero.

● Maladjustment symptoms: Search times too long, carriage run-away

● Measuring equipment/jigs	• DC voltmeter
● Measuring point	• TAO low-pass filter output
● Test disc and setting	• Empty magazine • Test mode
● Adjustment position	• VR4

Adjustment Procedure

Same as for TE offset adjustment-I, but with the DC voltage of the TAO LPF output adjusted to $0 \pm 50\text{mV}$.

The purpose of this additional adjustment is to correct any deviations generated when carrying out the tracking balance and tracking servo loop gain adjustments after completing TE offset adjustment- I.

8. 13 Tracking Balance Adjustment-II

- Purpose: To adjust the tracking servo offset to zero.
- Maladjustment symptoms: Search times too long, poor playability, carriage run-away

● Measuring equipment/ jigs	• Oscilloscope
● Measuring point	• TEY low-pass filter output
● Test disc and setting	• SONY TYPE 4 (or TYPE 3)
● Adjustment position	• VR5 • Test mode

Adjustment Procedure

- Steps 1 thru 5 same as tracking balance adjustment-I.
- Check that the level difference between the positive and negative amplitudes of the TEY signal is within 5% (See Fig. 15-17). If greater than 5%, adjust with VR5.
- If further adjustment was necessary in step 6, repeat TE offset adjustment-II.

8.14 Clock Adjustment (UC, US, ES Model)

● Purpose: To adjust the clock frequency to a suitable value

● Measuring equipment/jigs	• Frequency counter
● Measuring point	• CLOCK
● setting	• Clock adjustment mode
● Adjustment position	• C754

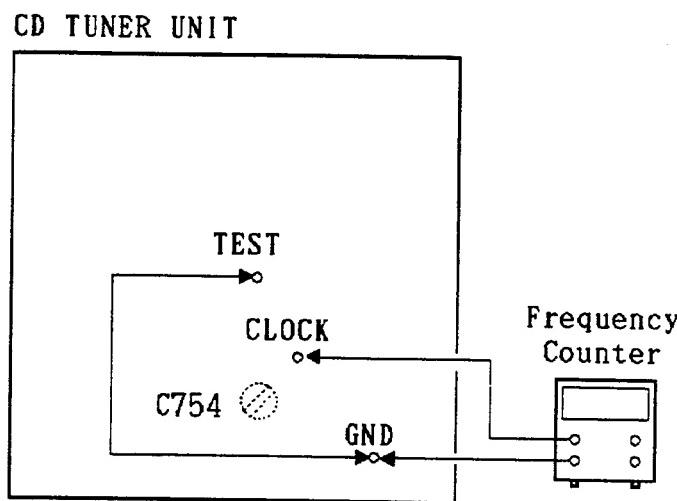


Fig. 41

Adjustment Procedure

1. Switch ACC, BACK-UP ON.
2. Connect TEST to GND. (Clock adjustment mode)
3. Connect the frequency counter to CLOCK.
4. Adjust C754 to obtain a frequency of 1,048,567Hz±2Hz.

8.15 Tuner Adjustment

• Connection Diagram

NOTICE: Select C1 so that total capacity of 80pF attained from the direction of the receiver jack.
 Z: Output impedance of SSG.

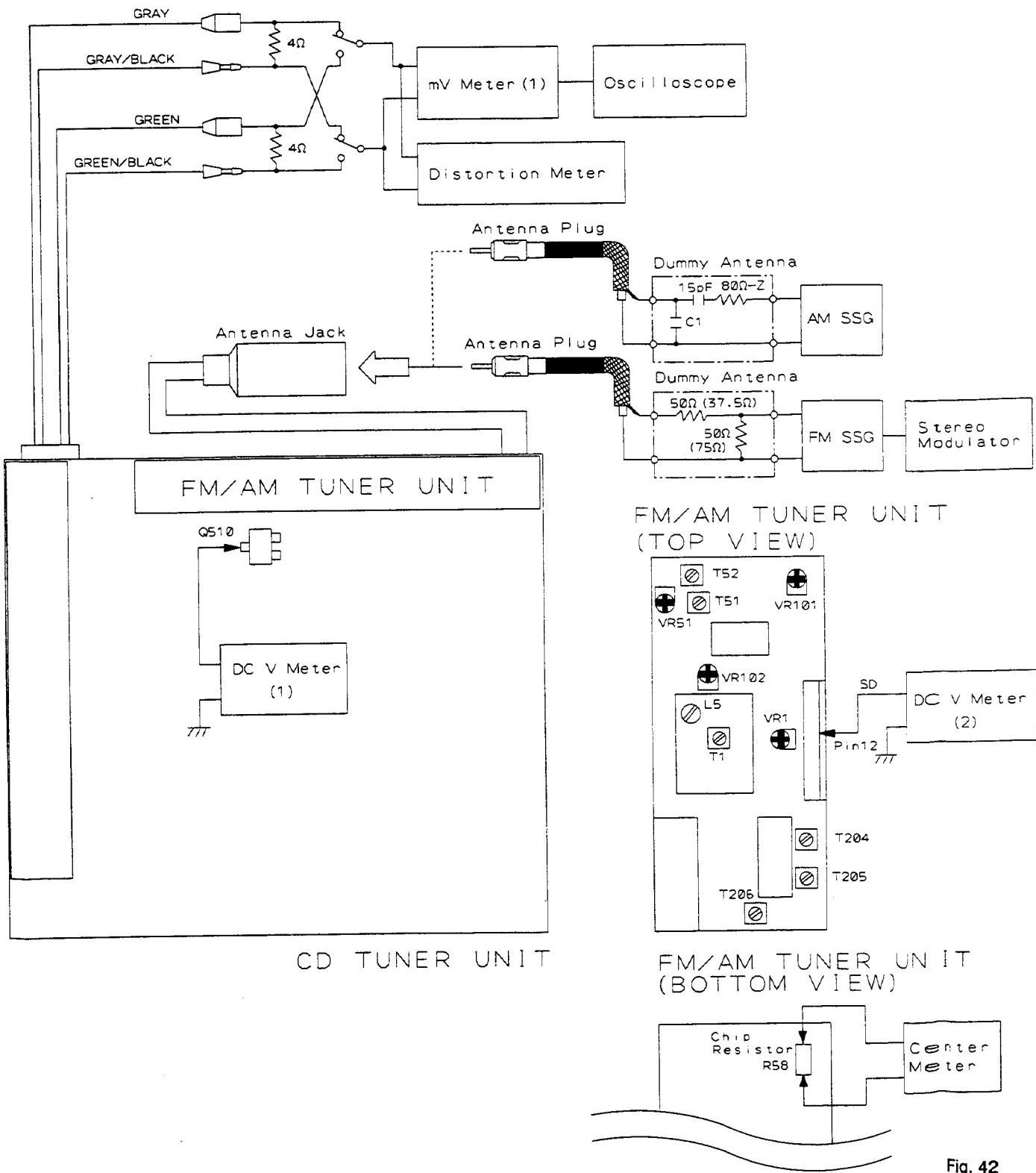


Fig. 42

MW/LW ADJUSTMENT (DEH-770SDK, 760SDK/WG, DEH-770, 760/EW)

	No.	AM SSG (400Hz, 30%)		Displayed Frequency (kHz)	Adjusting Point	Adjustment Method (Switch Position)
		Frequency (kHz)	Level (dB μ V)			
Tun-ing Volt	1	(MW MODE)		1,602	—	Verify that DC V Meter (1) is less than 6.5V.
	2	(LW MODE)		153	—	Verify that DC V Meter (1) is more than 2.0V.
IF	1	999	20-25	999	T204, 205, 206	mV Meter (1) :Maximum

AM ADJUSTMENT (DEH-770, 760, 660/UC, DEH-85, 630/US, DEH-710, 610/ES)

*:ES model when tuning step at 9kHz.

	No.	AM SSG (400Hz, 30%)		Displayed Frequency (kHz)	Adjusting Point	Adjustment Method (Switch Position)
		Frequency (kHz)	Level (dB μ V)			
Tun-ing Volt	1			1,710 *(1,602)	—	Verify that DC V Meter (1) is less than 6.5V.
	2			530 *(531)	—	Verify that DC V Meter (1) is more than 2.0V.
IF	1	1.000 *(999)	20-25	1.000 *(999)	T204, 205, 206	mV Meter (1) :Maximum

FM ADJUSTMENT

※ Stereo MOD.: 1kHz, L+R=90% , Pilot=10%

*: US and UC model

	No.	FM SSG (400Hz, 100%)		Displayed Frequency (MHz)	Adjusting Point	Adjustment Method (Switch Position)
		Frequency (MHz)	Level (dB μ V)			
IF	1	98.1	60	98.1	T51	Center Meter:0
	2	98.1	60	98.1	T52	Distortion Meter:Minimum
	3	Repeat No. 1-2 alternately so that the center meter indicates the 0 output and distortion meter indicates minimum output.				
Front End	1			108.0 *(107.9)	L5	DC V Meter(1):6.2 ± 0.2V
	2			87.5 *(87.9)	—	Verify that DC V Meter(1) is more than 2.1 ± 0.6V
	3	98.1	8	98.1	T1	Distortion Meter:Minimum
Soft Mute	1	98.1	60	98.1	—	mV Meter(1):A dB
	2	98.1	10	98.1	VR102	mV Meter(1):A-3dB
ARC	1	98.1※	35	98.1	VR101	mV Meter(1):Separation 5dB
SD	1	98.1	17	98.1	VR51	DC V Meter(2):Approx. 5V
	2	98.1	16	98.1	—	Verify that DC V Meter(2) is approx. 0V.
	3	98.1	55	98.1	VR1	** DC V Meter(2):Approx. 5V
	4	98.1	54	98.1	—	Verify that DC V Meter(2) is approx. 0V.

**: Connect collector of Q2 to GND.

Connect DC regulated power supply to pin 3 of FM front end through resistor (330Ω).

Add 4.3V from DC regulated power supply.

9. BLOCK DIAGRAM

• DEH-770/UC

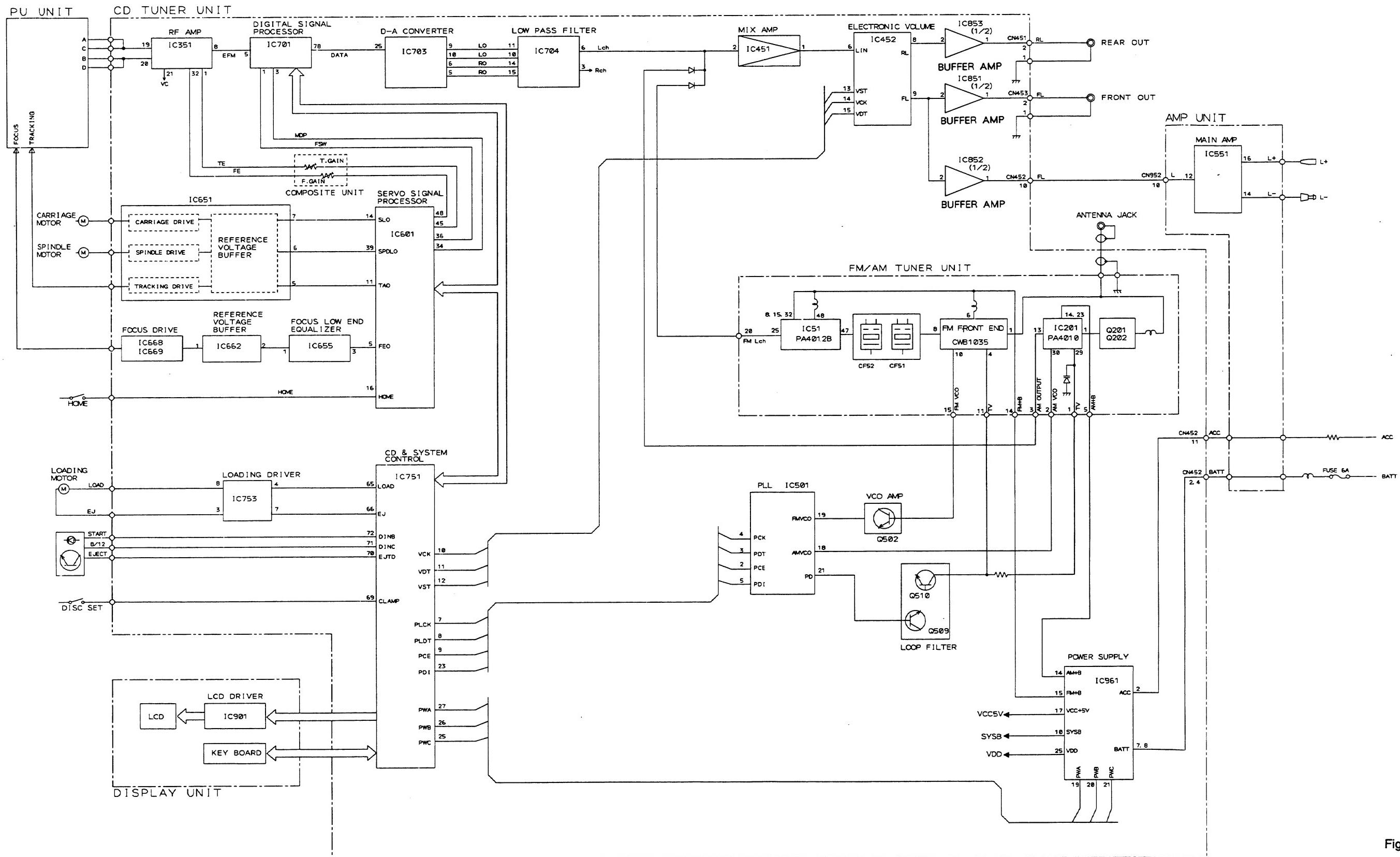


Fig. 43

- ICs

IC51: PA4012B

- ICs

IC51: PA4012E

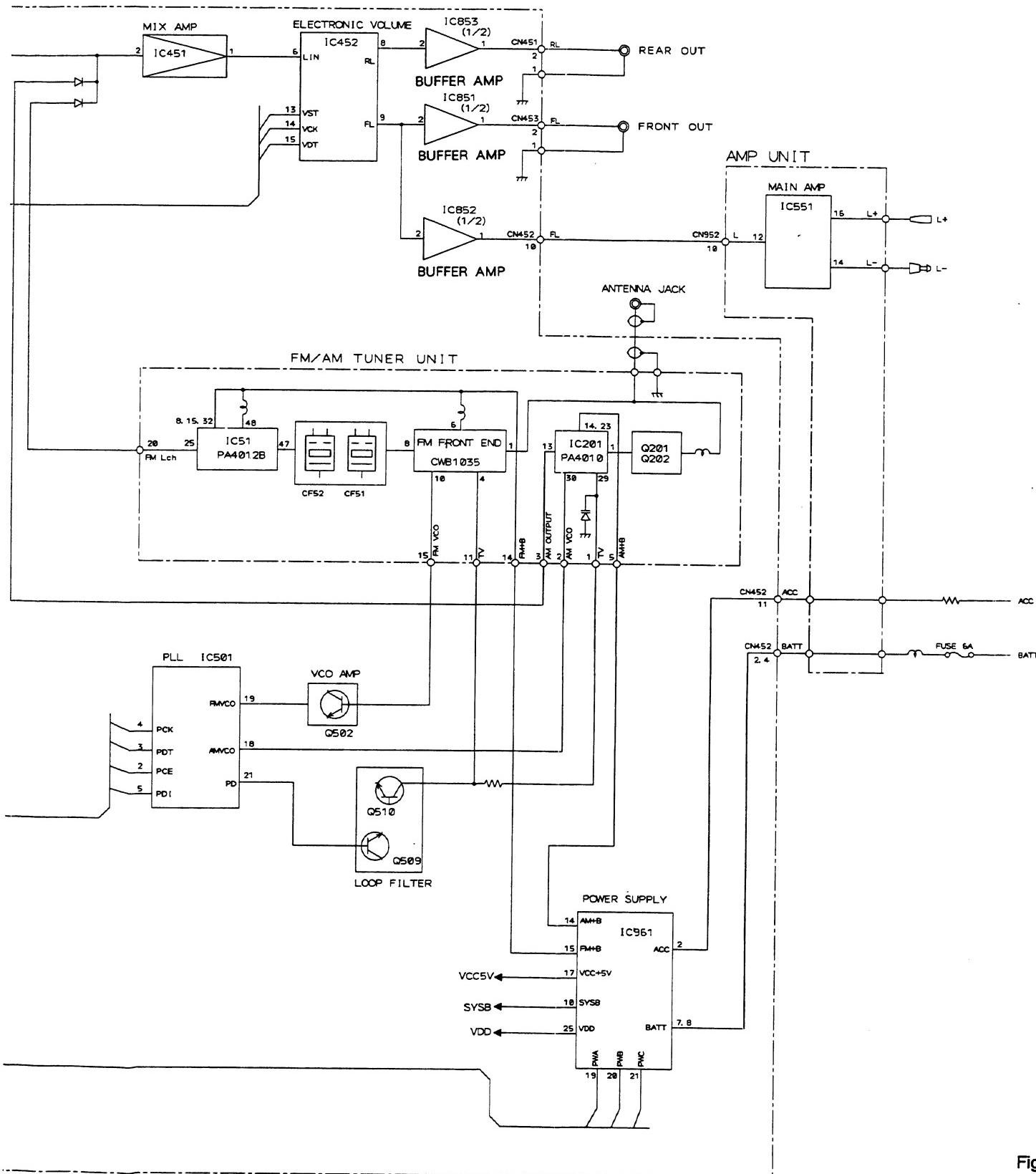
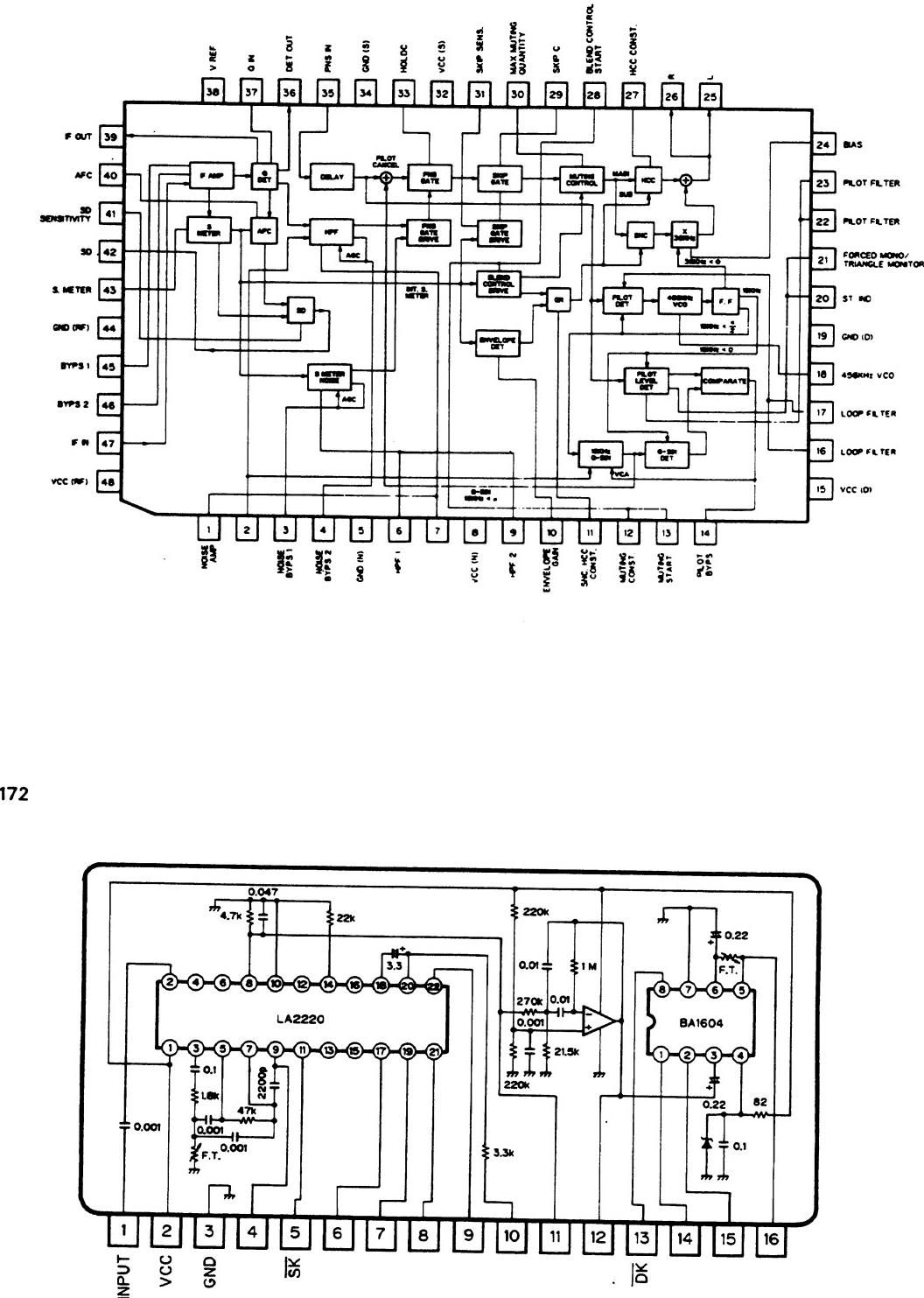
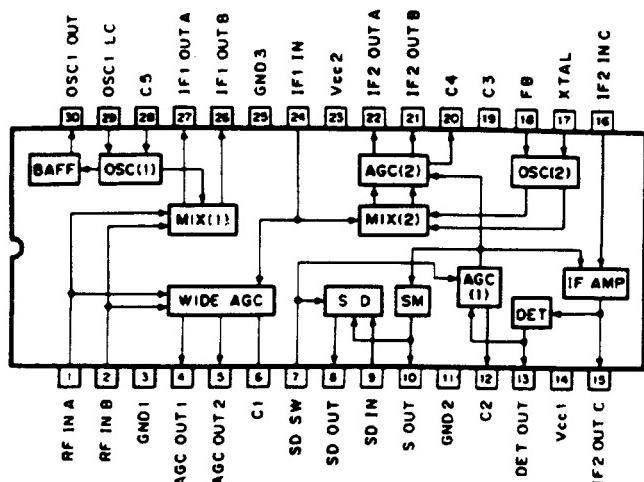


Fig. 43



42

IC201: PA4010



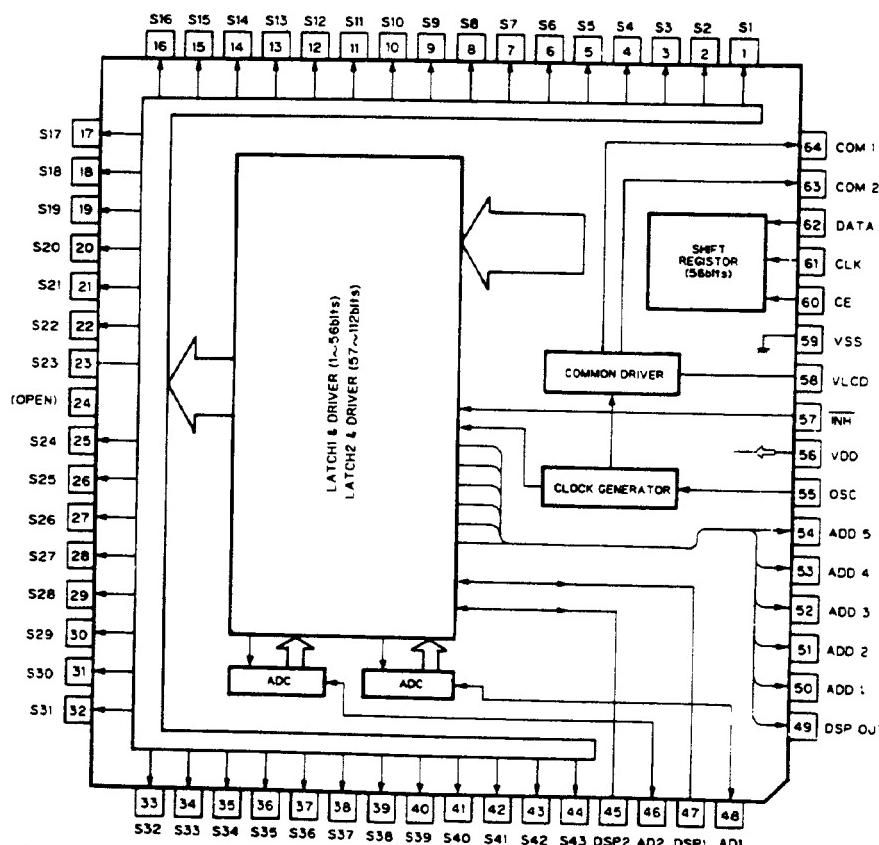
• Pin Functions (SM5807ES-M)

Pin	Pin name	I/O	Function and Operation
1	XT	input	Oscillator input
2	XT	output	Oscillator output
3	CKSL		"H": XT → 16.93MHz input
4	CKO	output	Clock output
5	LCI		44.1kHz synchronization clock input
6	DIN		Serial data input
7	BCKI		Bit clock input (Serial input)
8	VSS		GND
9	SCSL		System clock switching. "H": 192fs (fs: Sampling frequency)
10	DGR	output	R-ch digridge signal (176.4kHz)
11	DGL	output	L-ch digridge signal (176.4kHz)
12	DOUT	output	Serial data output
13	WDCO	output	Output control clock (352.8kHz)
14	LRCO	output	Output control clock (176.4kHz)
15	BCKO	output	Bit clock output (Serial output)
16	VDD		Power supply (5V)

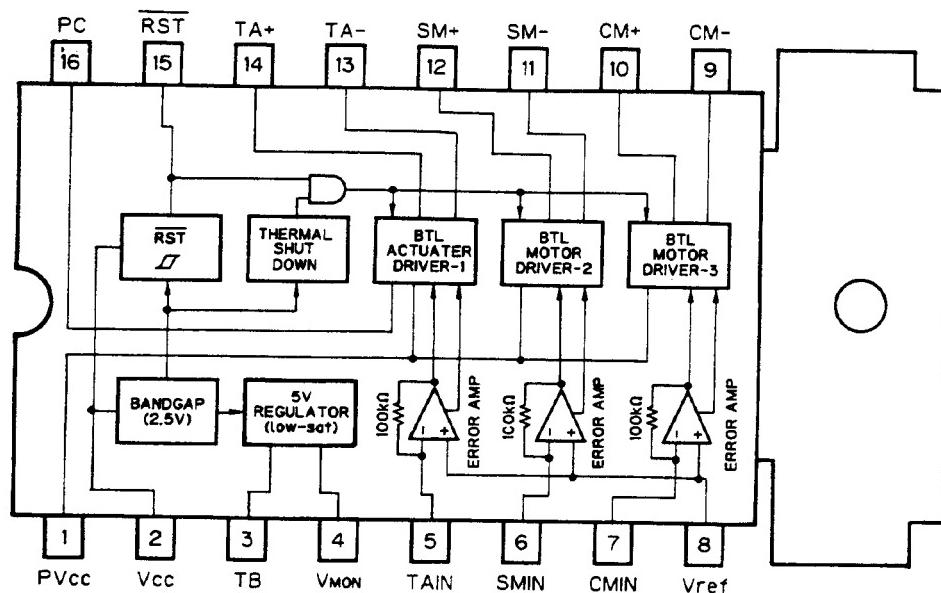
IC's marked by * are MOS type.

Be careful in handling them because they are very liable to be damaged by electrostatic induction.

* IC901: LC7582A



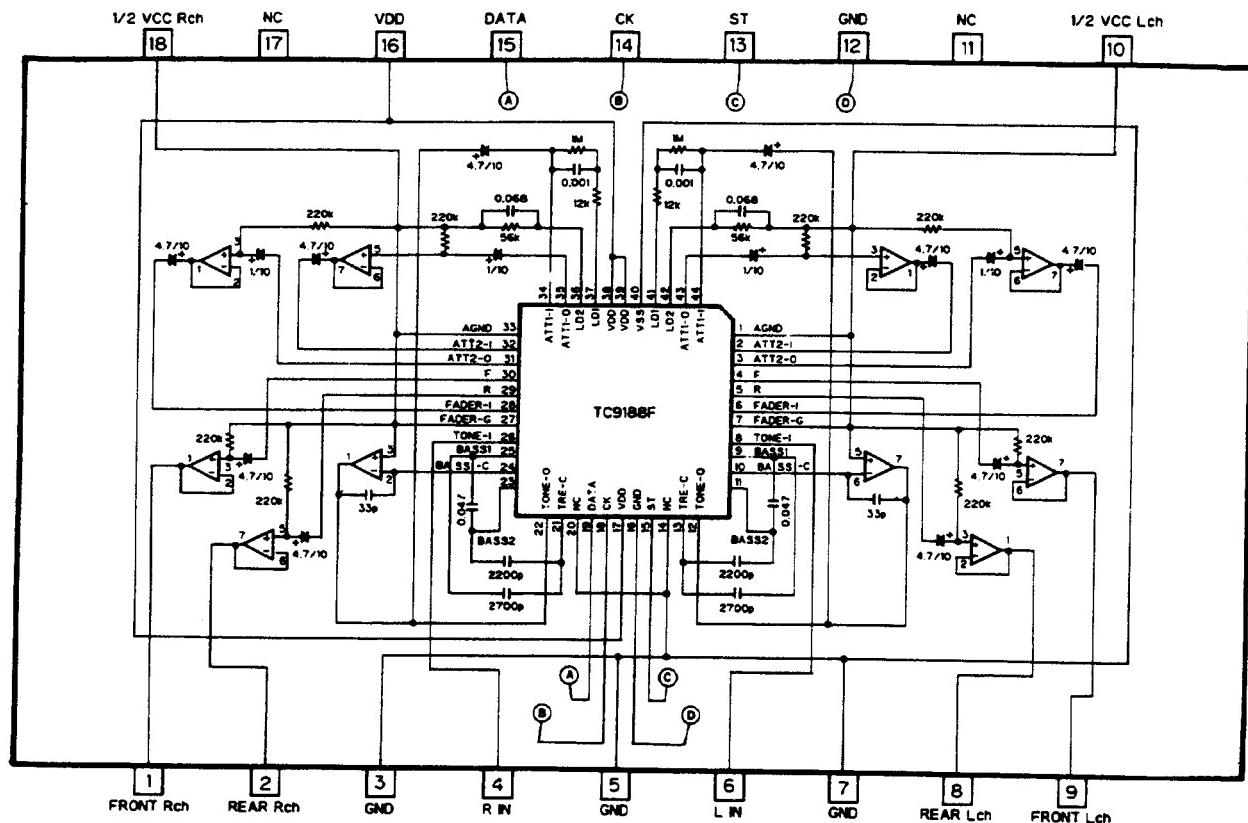
IC651: AN8377N



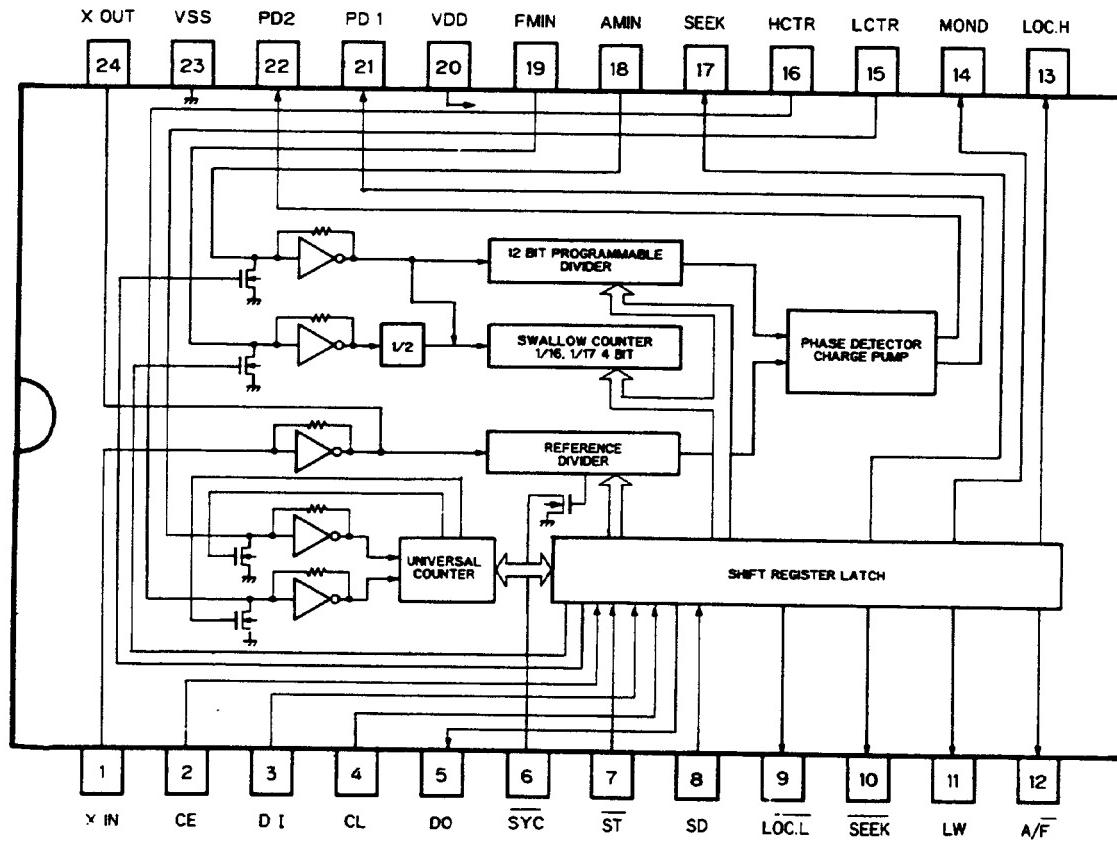
• Pin Functions (AN8377N)

Pin	Pin name	I/O	Function and Operation
1	PVCC		Driver power supply
2	VCC		Power supply
3	TB	input	Transistor base input
4	VMON	output	5V regulator output
5	TAIN	input	Actuator driver 1 error input
6	SMIN	input	Motor driver 2 error input
7	CMIN	input	Motor driver 3 error input
8	VREF	input	Vref input
9	CM-	output	Motor driver 3 - inverter output
10	CM+	output	Motor driver 3 - non-inverting output
11	SM-	output	Motor driver 2 - inverter output
12	SM+	output	Motor driver 2 - non-inverting output
13	TA-	output	Actuator driver 1 - inverter output
14	TA+	output	Actuator driver 1 - non-inverting output
15	RST	output	Reset output
16	PC		PC input

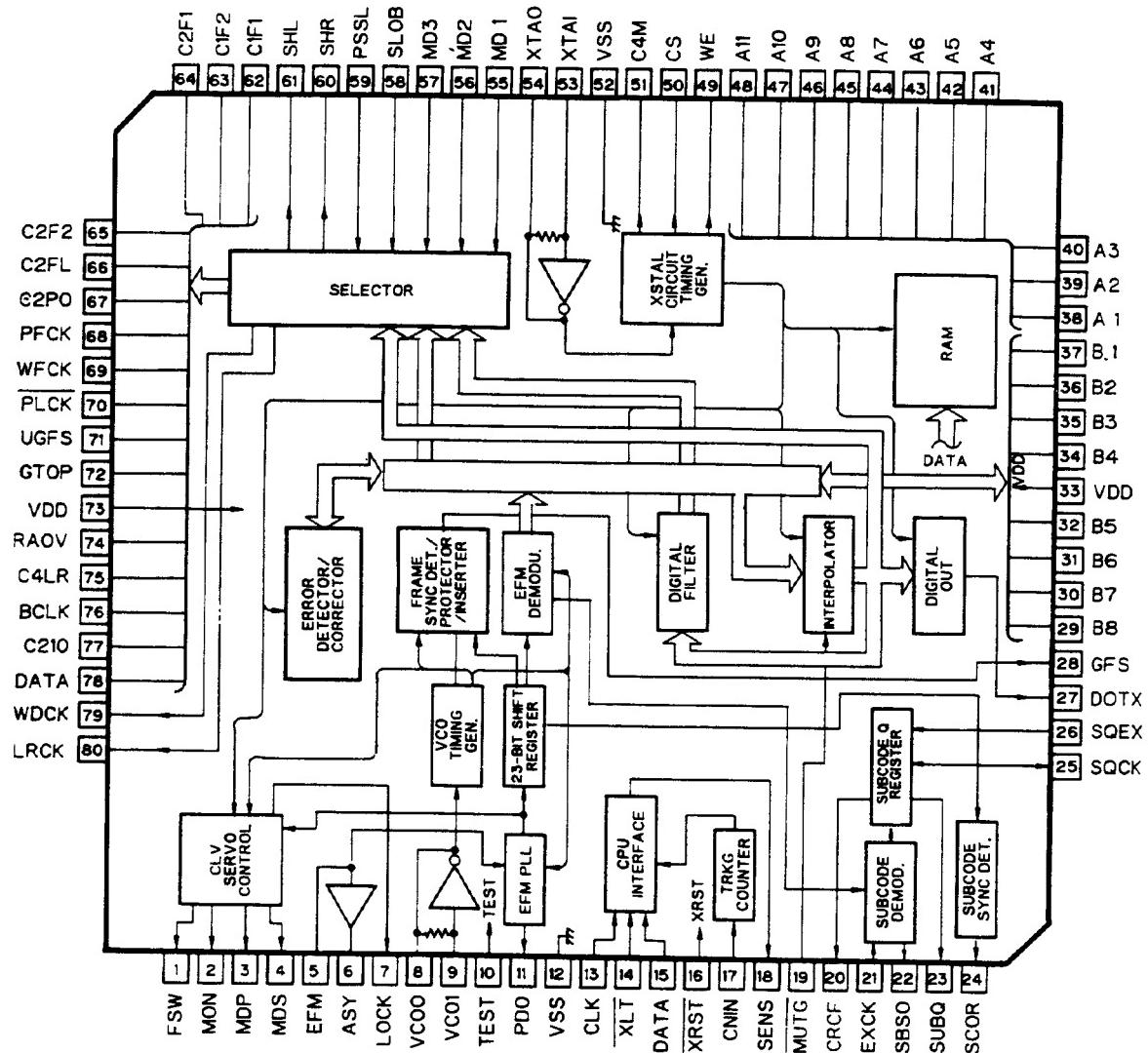
IC452: CWW1213



IC501: LC7218M



IC701: CXD1167Q



● Pin Functions (CXD1167Q)

Pin No.	Pin Name	I/O	Function and Operation
1	FSW	Output	Spindle motor output filter time constant selector output
2	MON	Output	Spindle motor ON/OFF control output
3	MDP	Output	Spindle-motor drive output - "rough" control in CLV-S mode, and phase control in CLV-P mode
4	MDS	Output	Spindle motor drive output - speed control in CLV-P mode
5	EFM	Input	EFM signal input from RF amplifier
6	ASY	Output	EFM signal slice level control output
7	LOCK	Output	Sampling of GFS signal by WFCK/16 - "H" output if "H", "L" output if "L" detected eight times in succession
8	VCOO	Output	VCO output - f = 8.6436MHz when EFM signal is locked
9	VCOI	Input	VCO input
10	TEST	Input	(OV)
11	PDO	Output	EFM signal and VCO/2 phase comparison output
12	V _{ss}	-	Ground (OV)
13	CLK	Input	Serial data transfer clock input from CPU - data latched by clock leading edge
14	XLT	Input	Latch input from CPU - 8-bit shift register data (serial data from CPU) is latched in each register.
15	DATA	Input	Serial data input from CPU
16	XRST	Input	System reset signal input - reset when "L"
17	CNIN	Input	Tracking pulse input
18	SENS	Output	Output of internal status according to address
19	MUTG	Input	Muting input - when ATT of internal register A is "L", MUTG "L" denotes normal status, and "H" muted status
20	CRCF	Output	Sub-code Q CRC check result output
21	EXCK	Input	Clock input for sub-code serial output
22	SBSO	Output	Sub-code serial output
23	SUBQ	Output	Sub-code Q output
24	SCOR	Output	Sub-code synchronizing S0+S1 output
25	SQCK	Input/Output	Sub-code Q read clock
26	SQEX	Input	SQCK selector input
27	DOTX	Output	Digital out output (WFCK output)
28	GFS	Output	Frame synchronizing lock status indicator output
29	B8	Input	Connected to GND
30	B7	Input	Connected to GND
31	B6	Input	Connected to GND
32	B5	Input	Connected to GND
33	V _{DD}	-	Power supply (+5V)
34	B4	Input	Connected to GND
35	B3	Input	Connected to GND

Pin No.	Pin Name	I/O	Function and Operation
36	B2	Input	Connected to GND
37	B1	Input	Connected to GND
38	A1	Input	Connected to GND
39	A2	Input	Connected to GND
40	A3	Input	Connected to GND
41	A4	Input	Connected to GND
42	A5	Input	Connected to GND
43	A6	Input	Connected to GND
44	A7	Input	Connected to GND
45	A8	Input	Connected to GND
46	A9	Input	Connected to GND
47	A10	Input	Connected to GND
48	A11	Input	Connected to GND
49	WE	Output	External RAM write enable signal output (active "L")
50	CS	Output	External RAM chip select signal output (active "L")
51	C4M	Output	X'tal frequency division output (f = 4.2336MHz)
52	V _{SS}	—	Ground (0V)
53	XTAI	Input	Crystal oscillator Input
54	XTAO	Output	Crystal oscillator output
55	MD1	Input	Mode selector input 1
56	MD2	Input	Mode selector input 2
57	MD3	Input	Mode selector input 3
58	SLOB	Input	Audio data output code selector input - 2's complement output "L", offset binary output if "H"
59	PSSL	Input	Audio data output mode selector input - serial output if "L", parallel output if "H"
60	SHR	Output	Aperture correction control output - "H" when right channel
61	SHL	Output	Aperture correction control output - "L" when left channel
62	C1F1	Output	C1F1 output
63	C1F2	Output	C1F2 output
64	C2F1	Output	C2F1 output
65	C2F2	Output	C2F2 output
66	C2FL	Output	C2FL output
67	C2PO	Output	C2PO output
68	RFCK	Output	RFCK output
69	WFCK	Output	WFCK output
70	PLCK	Output	PLCK output
71	UGFS	Output	UGFS output
72	GTOP	Output	GTOP output

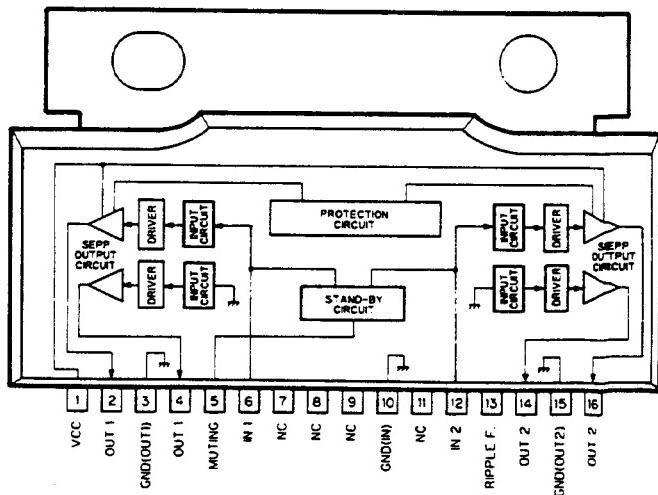
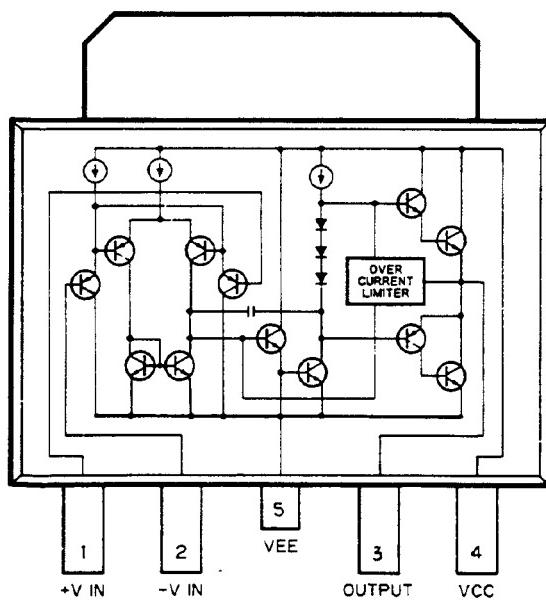
Pin No.	Pin Name	I/O	Function and Operation
73	V _{DD}	-	Power supply (+ 5V)
74	RAOV	Output	RAOV output
75	C4LR	Output	C4LR output
76	BCLK	Output	C21O output
77	C21O	Output	C21O output
78	DATA	Output	DATA output
79	WDCK	Output	Strobe signal output
80	LRCK	Output	Strobe signal output

Note:

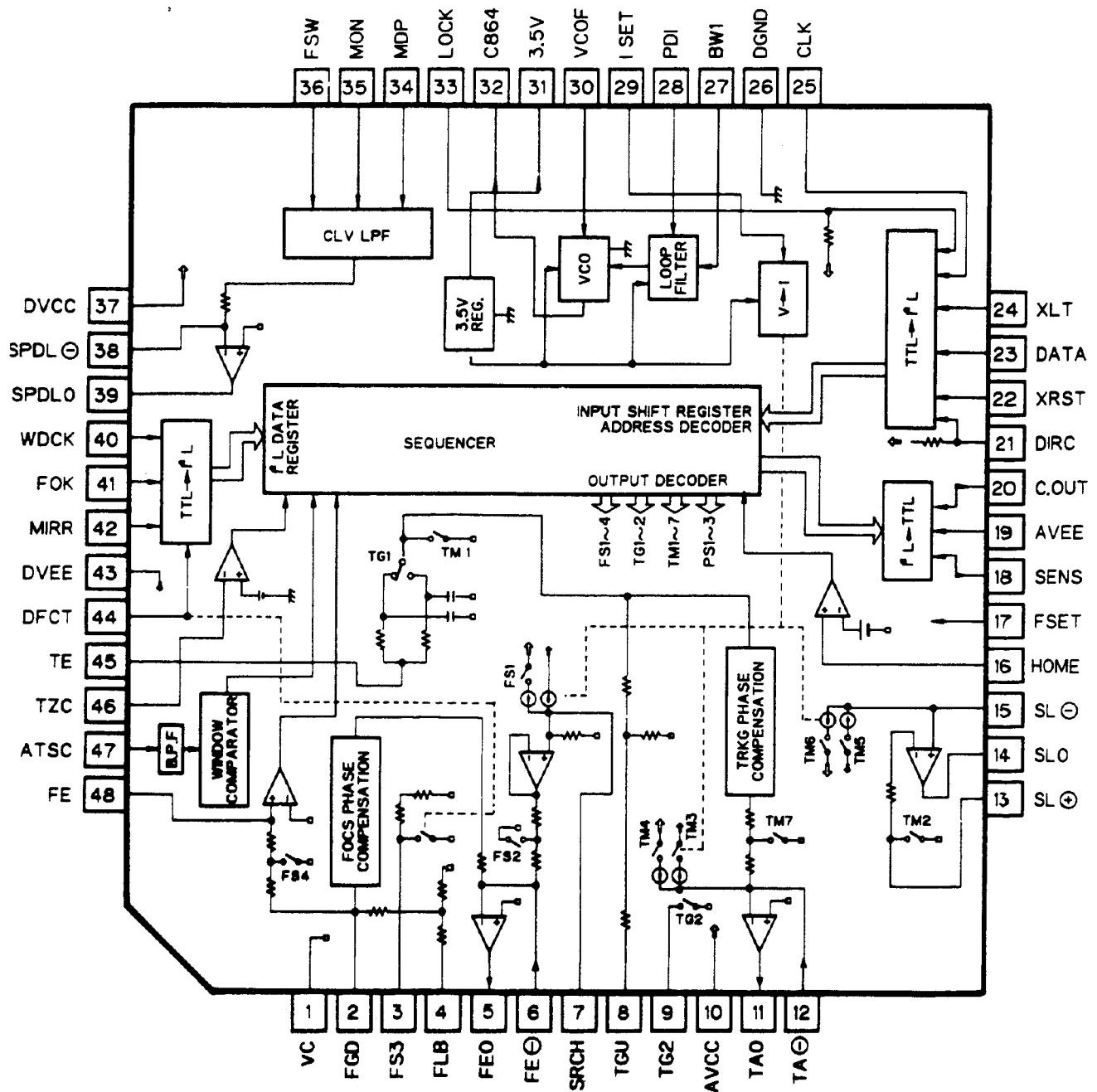
- C1F1: C1 decoding error correction status monitor output
 C1F2: C1 decoding error correction status monitor output
 C2F1: C2 decoding error correction status monitor output
 C2F2: C2 decoding error correction status monitor output
 C2FL: Corrected status output - "H" if C2 system currently being corrected cannot be corrected
 C2PO: C2 pointer indication output - synchronized with audio data output
 RFCK: Read frame clock output - crystal oscillator 7.35kHz
 WFCK: Write frame clock output - f = 7.35kHz when crystal oscillator is locked
 PLCK: VCO/2 output - f = 4.3218MHz when EFM signal is locked
 UGFS: Unprotected frame synchronizing pattern output
 GTOP: Frame synchronization protection status indicator output
 RAOV: ± 4 frame jitter absorption RAM overflow and underflow indicator output
 C4LR: Strobe signal
 BCLK: C21O inverting output
 C21O: Bit clock output
 DATA: Audio signal serial data output

IC668, 669: LA6501-FA

IC551: AN7188K



* IC601: CXA1082BQ

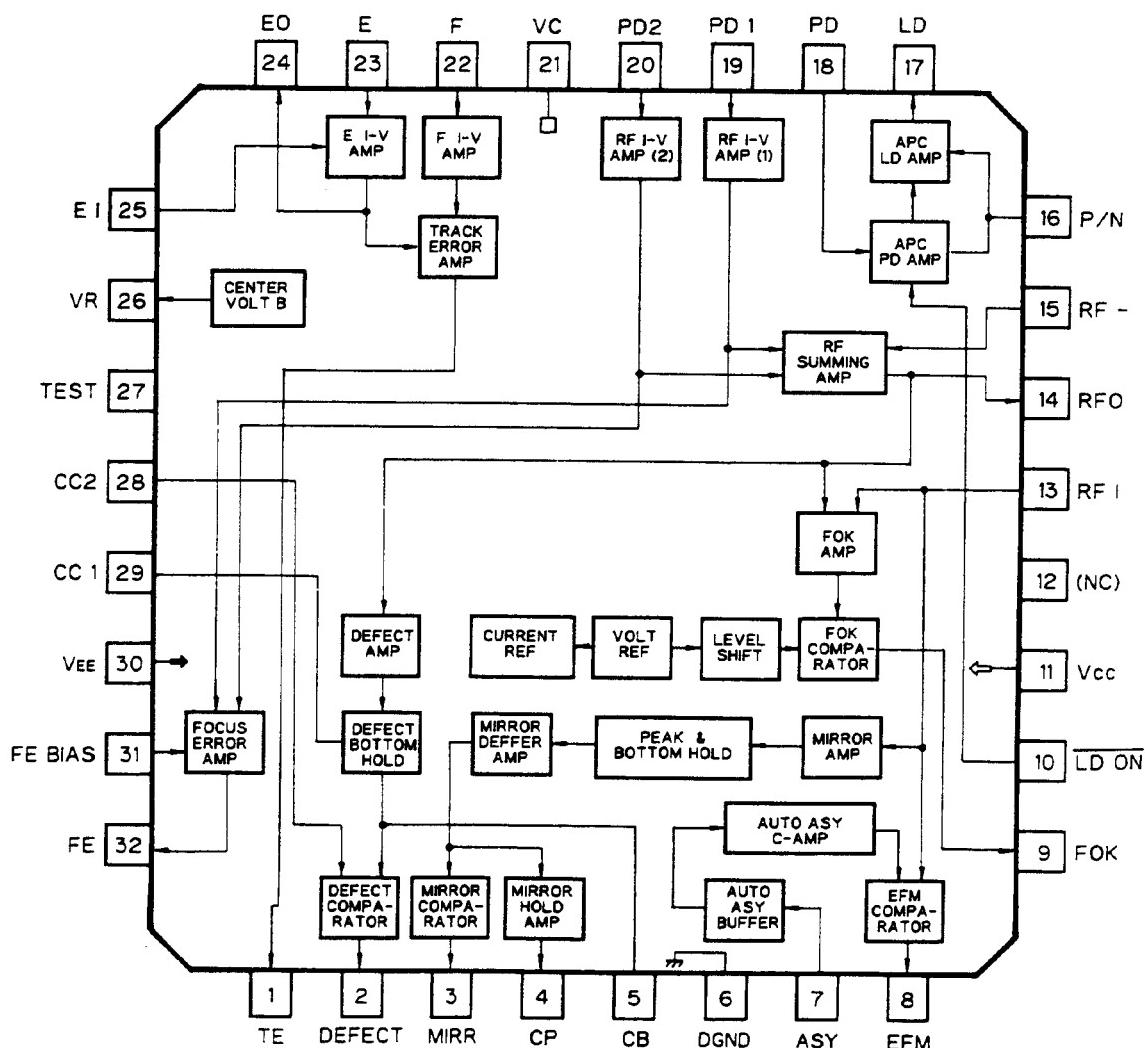


● Pin Functions (CXA1082BQ)

Pin No.	Pin Name	I/O	Function and Operation
1	VC		Servo reference voltage input pin
2	FGD		Connect to pin 3 to switch focus servo OFF when defect occurs
3	FS3		Internal DFCT switch closed when pin 44 is high
4	FLB		Focus servo low region boost external time constant pin
5	FEO	Output	Focus drive output - connect to low-end equalizer
6	FE-	Input	Focus amplifier inverter input pin
7	SRCH		Focus search waveform generation external time constant connector pin
8	TGU	Output	Tracking low-end equalizer connection output pin
9	TG2		Pin 7 discharge switch for starting focus search from lens center
10	AVCC		+5V connection
11	TAO	Output	Tracking drive output
12	TA-	Input	Tracking amplifier inverter input pin
13	SL +	Input	Sled amplifier non-inverting input pin
14	SLO	Output	Sled drive output
15	SL -	Input	Sled amplifier inverter input pin
16	HOME	Input	Sled home position detector switch input pin
17	FSET		Focus/tracking phase compensation peak and CLV low-pass filter f_0 setting pin
18	SENS	Output	Output of FZC, AS, TZC, SSTOP, and BUSY depending on command from CPU
19	AVEE		AGND connection
20	COUT	Output	Track counter signal output
21	DIRC		Not used
22	XRST	Input	Reset input pin - reset when "L"
23	DATA	Input	Serial data input from CPU
24	XLT	Input	Latch input from CPU
25	CLK	Input	Serial data transfer clock input from CPU
26	DGND		DGND connection
27	BW1		Loop filter external time constant pin
28	PDI	Input	Input of CXD1135 phase comparator output PDO
29	ISET		Current which determines focus search, track jump, and sled kick height
30	VCOF		VCO free-running frequency more or less inversely
31	3.5V	Output	Proportional to resistance value between pins 30 and 31
32	C864	Output	8.64MHz VCO output pin
33	LOCK		Not used
34	MDP		Connect to MDP pin of CXD1135
35	MON		Connect to MON pin of CXD1135
36	FSW		CLV servo error signal low-pass filter external time constant pin
37	DVCC		+5V connection
38	SPDL -	Input	Spindle drive amplifier inverter input pin

Pin No.	Pin Name	I/O	Function and Operation
39	SPDLO	Output	Spindle drive output
40	WDCK	Input	Auto-sequence clock input 176.4kHz
41	FOK	Input	FOK signal input pin
42	MIRR	Input	Mirror signal input pin
43	DVEE		DGND connection
44	DFCT	Input	DEFECT signal input pin - defect countermeasure circuit activated when this input is high
45	TE	Input	Tracking error signal input pin
46	TZC	Input	Tracking zero-cross comparator input pin
47	ATSC	Input	Tracking lens offset detector window comparator input pin
48	FE	Input	Focus error signal input pin

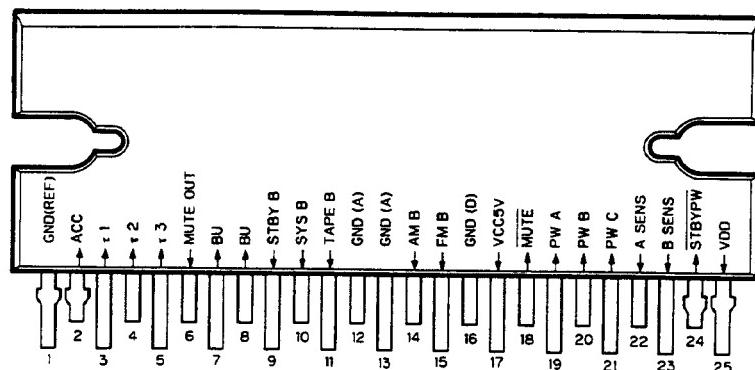
* IC351: CXA1081Q



● Pin Functions (CXA1081Q)

Pin No.	Pin. Name	I/O	Function and Operation
1	TE	Output	Tracking error amplifier output pin
2	DEFECT	Output	DEFECT comparator output pin
3	MIRR	Output	MIRR comparator output pin
4	CP	Input	MIRR hold capacitor connector pin - MIRR comparator non-inverting input pin
5	CB	Input	DEFECT bottom hold capacitor connector pin
6	DGND		Ground connection
7	ASY	Input	Auto asymmetry control input pin
8	EFM	Output	EFM comparator output pin
9	FOK	Output	Focus OK comparator output pin
10	LDON	Input	Laser diode ON/OFF switching
11	VCC		Positive power supply pin
12	NC		
13	RFI	Input	Input of capacitance-coupled RF summing amplifier output
14	RFO	Output	RF summing amplifier output pin - eye pattern check point
15	RF-	Input	RF summing amplifier feedback input pin
16	P/N	Input	Laser diode P-sub/N-sub selector pin
17	LD	Output	APC LD amplifier output pin
18	PD	Input	APC PD amplifier input pin
19	PD1	Input	RF I-V amplifier (1) inverter input pin - connected to photodiode A + C pin for current input
20	PD2	Input	RF I-V amplifier (2) inverter input pin - connected to photodiode B + D pin for current input
21	VC		Connected to VR
22	F	Input	I-V amplifier inverter input pin - connected to photodiode for current input
23	E	Input	I-V amplifier inverter input pin - connected to photodiode for current input
24	EO	Output	E I-V amplifier output pin
25	EI	Input	E I-V amplifier feedback input for E I-V amplifier gain adjustment
26	VR	Output	(V _{CC} + V _{EE})/2 DC voltage output pin
27	TEST		Open
28	CC2	Input	Input of capacitance-coupled DEFECT bottom hold output
29	CC1	Output	DEFECT bottom hold output pin
30	VEE		Ground connection
31	FE BIAS	Input	Focus error amplifier non-inverting bias pin Used in focus error amplifier CMR adjustment
32	FE	Output	Focus error amplifier output pin

IC961: PA2018



• Pin Functions (PA2018)

Pin No.	Pin Name	I/O	Function and Operation
1	GND		GND (ref) Reference GND
2	ACC	Input	Connected to accessory power supply of a car
3	r1	Input	Connected with external capacity for VDD backup
4	r2	Input	Connected with external capacity and used for setting of the operation time of the overcurrent protective function
5	r3	Input	Connected with external capacity and used for setting of the delay time of MUTE OUT
6	MUTEOUT	Output	MUTE circuit control output
7	BU	Input	Connected to car backup power supply
8	BU	Input	Connected to car backup power supply
9	STBYB	Output	Power amplifier control signal output
10	SYSB	Output	Stabilized power output for circuits (sound quality, sound volume, balance, etc.) common to the system
11	TAPEB	Output	Stabilized power output for cassette deck circuit (equalizer amplifier, etc.)
12	GND(A)		Analog GND
13	GND(A)		Analog GND
14	AMB	Output	Stabilized power output for AM tuner circuit
15	FMB	Output	Stabilized power output for FM tuner circuit
16	GND(D)	Output	Digital GND
17	VCC5V	Output	Stabilized power output used for microcomputer interface circuit
18	MUTE	Input	MUTE control input from the outside (MUTE OUT at H for input of L)
19	PWA	Input	Input for output selection, which controls the output with three bit signals of PWA, PWB, and PWC
20	PWB	Input	
21	PWC	Input	
22	ASENS	Output	ACC line voltage detection output (H for voltage detection)
23	BSENS	Output	BU line voltage detection output (H for voltage detection)
24	STBYPW	Output	Terminal for internal circuit which is connected with external capacity
25	VDD	Output	Stabilized power output for microcomputer, with backup and overcurrent protection functions

DECODER LOGIC (PA 2018)

INPUT			OUTPUT			
Pin 19 PWA	Pin 20 PWB	Pin 21 PWC	Pin 10 SYSB	Pin 11 TAPEB	Pin 15 FMB	Pin 14 AMB
L	L	L	OFF	OFF	OFF	OFF
L	L	H	ON	OFF	OFF	ON
L	H	L	ON	OFF	ON	OFF
L	H	H	ON	OFF	OFF	OFF
H	L	L	ON	ON	OFF	OFF
H	L	H	ON	ON	OFF	ON
H	H	L	ON	ON	ON	OFF
H	H	H	ON	ON	ON	ON

• Detection of voltage

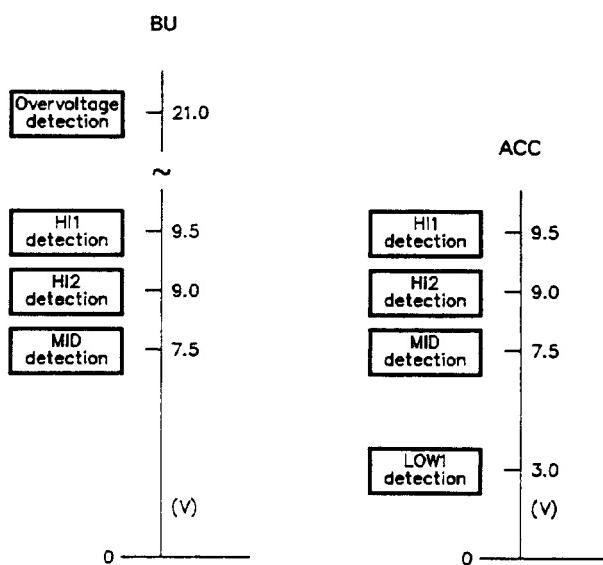


Fig. 44

- | | | | |
|----------------------|--|--|--------------------------------------|
| HI1 detection | 1. MUTE operation stop control | LOW1 detection | 1. MUTE operation control |
| HI2 detection | 2. Audio system power output start control | 2. Control of low current consumption mode | |
| MID detection | 1. Control of operation of microcomputer and control systems | Overvoltage detection | 1. Control of outputs other than VDD |
| | 2. Audio system power output stop control | | |

- Output from power IC (PA2018) to microcomputer system

- 1) VDD: Normally output according to the voltage of r_1
- 2) VCC: Output when BU is above the MID detection voltage and ACC is above the MID detection voltage.

<VCC output requirements>

$BU \geq \text{MID detection}$
$ACC \geq \text{MID detection}$

- 3) A sens: H output when BU is above the MID detection voltage and ACC is above the MID detection voltage.

L output when above requirements are not met
<A sens H-output requirements>

$BU \geq \text{MID detection}$
$ACC \geq \text{MID detection}$

- 4) B Sens: H output when BU is above the MID detection voltage

L output when the above requirement is not met
<B sens H-output requirement>

$BU \geq \text{MID detection}$

- Output from power IC (PA2018)

- 1) SYSB, TAPEB, FMB, AMB:

Hysteresis operation (See the figure below)

ON with HI2 detection voltage and OFF with MID detection voltage

ON: When BU is above the HI2 detection voltage and ACC is above the HI2 detection voltage and when any one of inputs (A, B, and C) for output selection is H

<ON requirements>

$BU \geq \text{HI2 detection}$
$ACC \geq \text{HI2 detection}$
A or B or C = H

OFF: When BU is less than the MID detection voltage or ACC is less than the MID detection voltage or when all of inputs (A, B, and C) for output selection are L

<OFF requirements>

$BU < \text{MID detection}$
$ACC < \text{MID detection}$
A and B and C = L

- * For the output state of inputs (A, B, and C) for output selection, refer to the attached material 1. Decoder Logic.

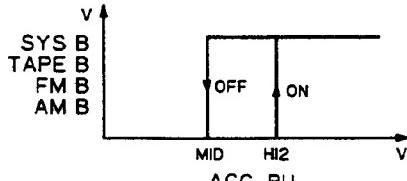


Fig. 45

- 2) STBY B: Output in synchronization with SYSB

- 3) MUTE OUT

Normal operation (See the figure below)

Hysteresis operation

ON with HI2 detection voltage and OFF with HI1 detection voltage

ON: ① When BU is less than the HI2 detection voltage and ACC is above the LOW1 detection voltage

or

when ACC is less than the HI2 detection voltage

and

ACC is above the LOW1 detection voltage
<ON requirements>

$BU < \text{HI2 detection}$
$ACC \geq \text{LOW1 detection}$

$ACC < \text{HI2 detection}$
$ACC \geq \text{LOW1 detection}$

- ② When MUTE input is L

OFF: ① When BU is above the HI1 detection voltage and ACC is above HI1 detection voltage

- ② When ACC is less than the LOW1 detection voltage

<OFF requirements>

$BU \geq \text{HI1 detection}$
$ACC \geq \text{HI1 detection}$

$ACC < \text{LOW1 detection}$

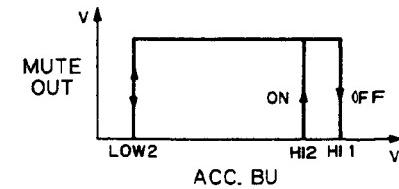


Fig. 46

Delay operation (See the figure below)

The time period during which either BU or ACC remains below the MID detection voltage is represented by "T". Two time periods determined from the external capacity of τ_3 terminal are respectively represented by T3A and T3B.

- ① $T \geq T_{3B}$

Delay MUTE OUT ON for a period from rise of BU and ACC above the MID detection voltage up to the end of T3A

- ② $T < T_{3B}$

MUTE OUT not performing delay MUTE OUT up to the end of T3A in (1).

Operation time with the external capacity (condenser) connected to τ_3 :

T3A: about 30ms at 0.1μ

T3B: about 30ms at 0.1μ ($T_{3A} = T_{3B}$)

- * When L is input to the MUTE terminal, with MUTE OUT OFF and BU and ACC between HI1 and HI2 detection voltages, MUTE OUT is turned ON. When the MUTE terminal changes from L to H in this state, MUTE OUT remains ON. This ON state is canceled and MUTE OUT is turned OFF when BU and ACC rise above the HI1 detection voltage.

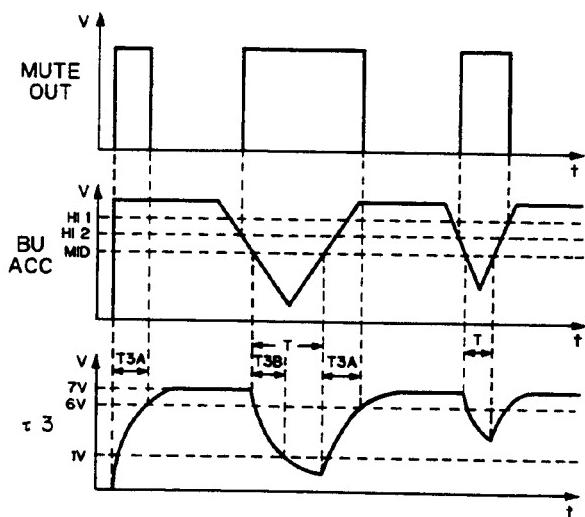
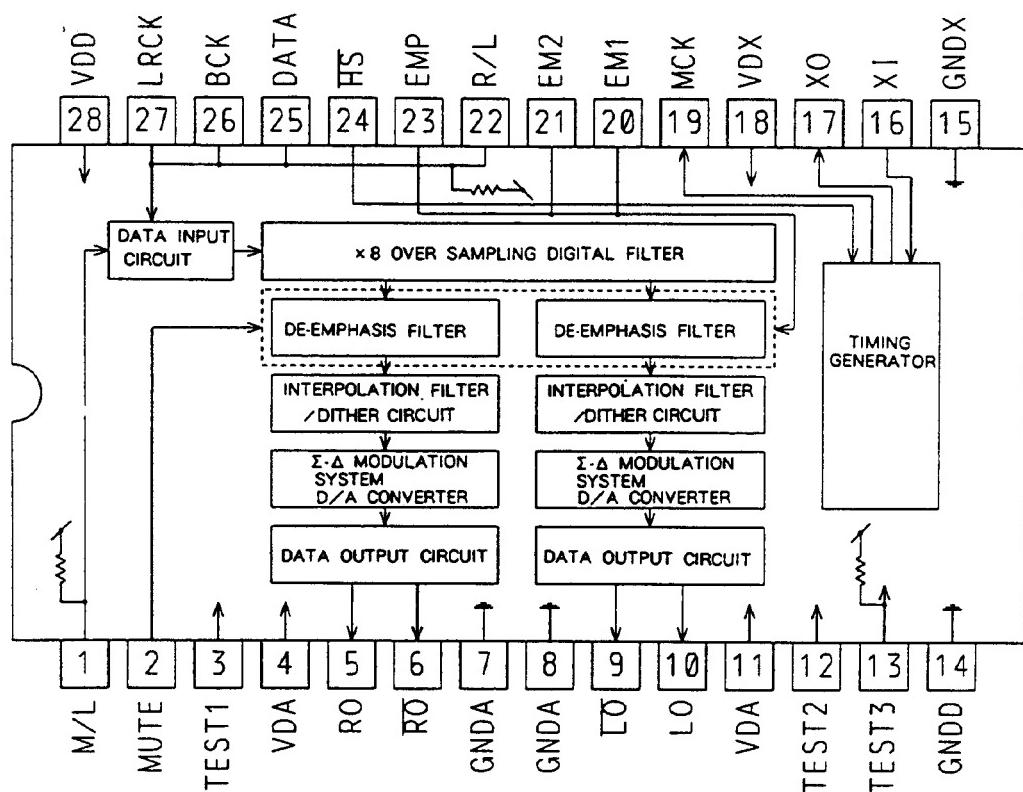
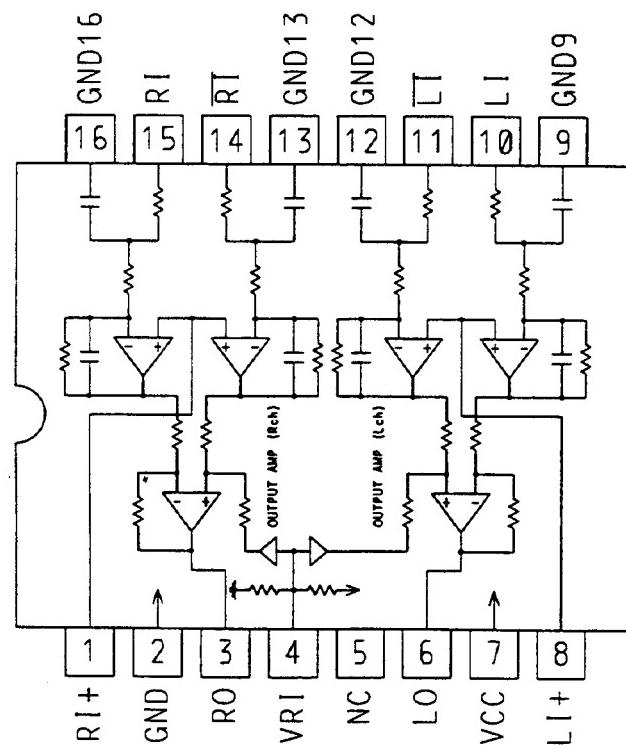


Fig. 47

IC703: TC9237F



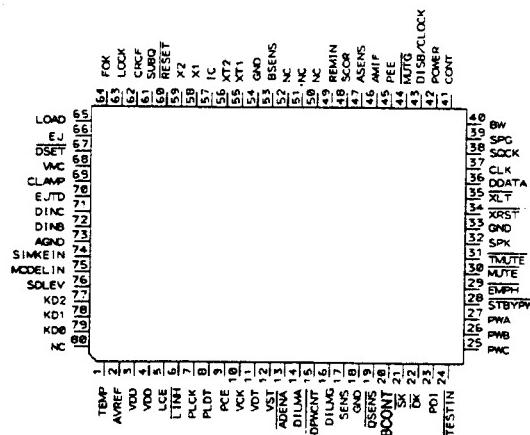
IC704: TA2009F



* IC751: PD4306

IC's marked by * are MOS type.

Be careful in handling them because they are very liable to be damaged by electrostatic induction.



• Pin Functions (PD4306)

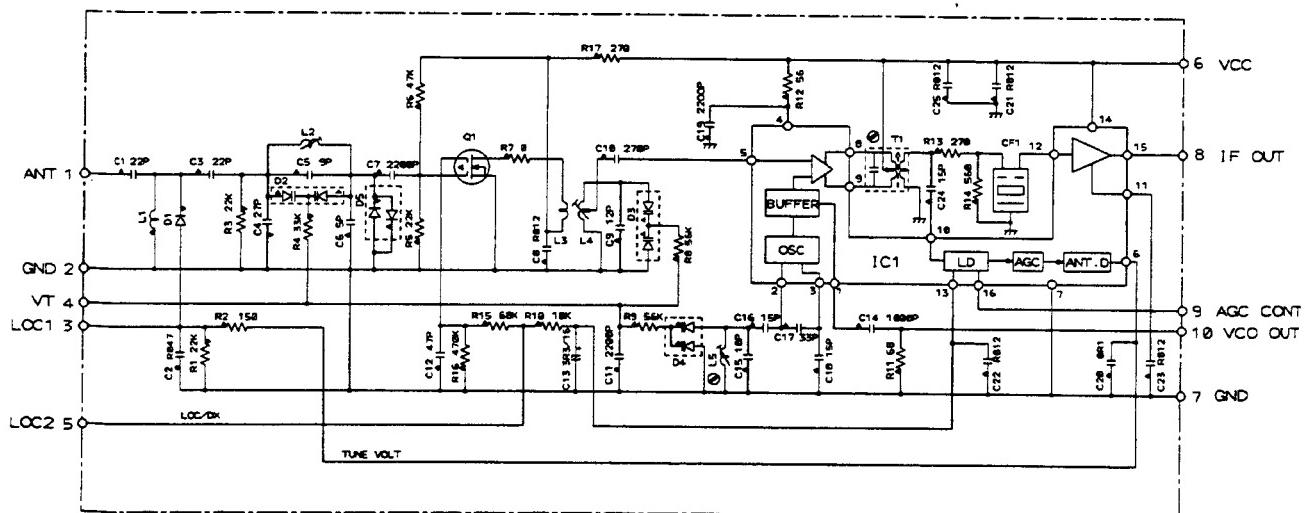
Pin No.	Pin Name	I/O	Output Format	Function and Operation	Stanby	Reset
1	TEMP	Input		High-temperature stop detection/stop input L: HOT state		
2	AVREF	Input		A/D converter reference voltage H: A/D converter enable		
3	VDD			VDD		
4	VDD			VDD		
5	LCE	Output	C	IC901 (LC7582A) chip enable	L	HiZ
6	LINH	Output	C	IC901 (LC7582A) inhibit output	L	HiZ
7	PLCK	Output	C	PLL (IC501), LCD (IC901) common clock output	L	HiZ
8	PLDT	Output	C	PLL (IC501), LCD (IC901) common data output	L	HiZ
9	PCE	Output	C	IC501 (LC7218M) chip enable	L	HiZ
10	VCK	Output	C	IC901 (LC7582A) clock output	L	HiZ
11	VDT	Output	C	IC901 (LC7582A) data output	L	HiZ
12	VST	Output	C	IC901 (LC7582A) strobe output	L	HiZ
13	ADENA	Output	C	AVREF control output H: Standby	H	HiZ
14	DILMA	Output	C	Dual illumination amber output H: Amber lamp ON	Keep	HiZ
15	NPWCNT	Output	C	Grill power control output H: Standby/detach	H	HiZ
16	DILMG	Output	C	Dual illumination green output H: Green lamp ON	Keep	HiZ
17	SENS	Input		CD servo, Internal state monitor input for signal processing LSI		
18	GND			GND		
19	DSENS	Input		Detach sense input	HiZ	HiZ
20	BCONT	Input		BCONT input	HiZ	HiZ
21	SK	Input		SK signal input L: SK input provided	HiZ	HiZ
22	DK	Input		DK signal input L: DK input provided	HiZ	HiZ
23	PDI	Input		IC501 (LC7218M) data input	HiZ	HiZ
24	TESTIN	Input		Test mode input H: Normal	HiZ	HiZ
25	PWC	Output	C	Power IC (IC961) power selection C output	L	HiZ
26	PWB	Output	C	Power IC (IC961) power selection B output		
27	PWA	Output	C	Power IC (IC961) power selection A output		

Pin No.	Pin Name	I/O	Output Format	Function and Operation	Stanby	Reset
28	STBYPW	Output	C	Power IC (IC961) standby control output	L	HiZ
29	EMPH	Output	N _M	Emphasis selection output H: Emphasis ON	H	HiZ
30	MUTE	Output	N _M	Line mute output	RUP-H	HiZ
31	TMUTE	Output	N _M	Tuner mute output	RUP-H	HiZ
32	SPK	Output	N _M	Spindle kick control output H: Kicking, braking	L	HiZ
33	GND			GND		
34	XRST	Output	N _M	IC701 (CXD1167Q) reset output L: Reset	L	HiZ
35	XLT	Output	N _M	IC701 (CXD1167Q) serial data latch output	L	HiZ
36	DDATA	Output	N _M	IC701 (CXD1167Q) Serial data output	L	HiZ
37	CLK	Output	N _M	IC701 (CXD1167Q) Serial clock output	L	HiZ
38	SQCK	Output	N _M	Sub-code clock output	L	HiZ
39	SPG	Output	C	Spindle gain selection output L: 8cm, H: 12cm	L	HiZ
40	BW	Output	C	Spindle band selection output L: Searching H: Normal	H	HiZ
41	CONT	Output	C	PWM driver ON/OFF output H: ON	L	HiZ
42	POWER	Output	C	CD+5V output H: CD power ON	L	HiZ
43	DISB/CLOCK	Output	C	AUX control output/for clock adjustment H: AUX inhibit	L	HiZ
44	MUTG	Output	C	IC701 (CXD1167Q) mute control output L: Mute ON	L	HiZ
45	PEE	Output	C	Key touch peep sound output	L	HiZ
46	AMIF	Input		AMIF count input		
47	ASENS	Input		ACC detection input L: ACC down	HiZ	HiZ
48	SCOR	Input		Sub-code sink input	HiZ	HiZ
49	REMIN	Input		Wireless remote control pulse input	HiZ	HiZ
50~52	NC					
53	BSENS	Input		BACK UP detection input L: BACK-UP DOWN	HiZ	HiZ
54	GND			GND		
55	XTI	Input		Blank, connected to GND		
56	XT2	Output		Blank		
57	IC			Connected to GND		
58	X1	Input		Oscillator input		
59	X2	Output		Oscillator output		
60	RESET			Reset		
61	SUBQ	Input		Sub-code data input	HiZ	HiZ
62	CRCF	Input		CR check input	HiZ	HiZ
63	LOCK	Input		Spindle lock detection input H: Lock	HiZ	HiZ
64	FOK	Input		Focus OK detection input	HiZ	HiZ
65	LOAD	Output	N _M	Loading motor control output	L	HiZ
66	EJ	Output	N _M	Loading motor driver control output H: Eject	L	HiZ
67	DSET	Output	N _M	Output for disk set LED	RUP-H	HiZ
68	VMC	Output	N _M	Loading motor driver power control output	L	HiZ
69	CLAMP	Input		Disk clamp end detection input L: Clamp over	HiZ	HiZ
70	EJTD	Input		Disk ejection end detection input L: Eject over	HiZ	HiZ
71	DINO	Input		Disk ejection detection C input	HiZ	HiZ

Pin No.	Pin Name	I/O	Output Format	Function and Operation	Stanby	Reset
72	DINB	Input		Disk ejection detection B input	HiZ	HiZ
73	AGND			A/D converter GND		
74	SIMKEIN	Input		Tuner destination selection input		
75	MODELIN	Input		Model selection input		
76	SDLEV	Input		SD signal level input H: Strong level broadcast station		
77	KD2	Input		Key return input		
78	KD1	Input		Key return input		
79	KD0	Input		Key return input		
80	NC					

Symbol	Meaning
C	C-MOS
N _M	Neutral resistivity N channel open drain
Hiz	High impedance
RUP-H	With pull-up resistor

• FM Front End (CWB 1035)

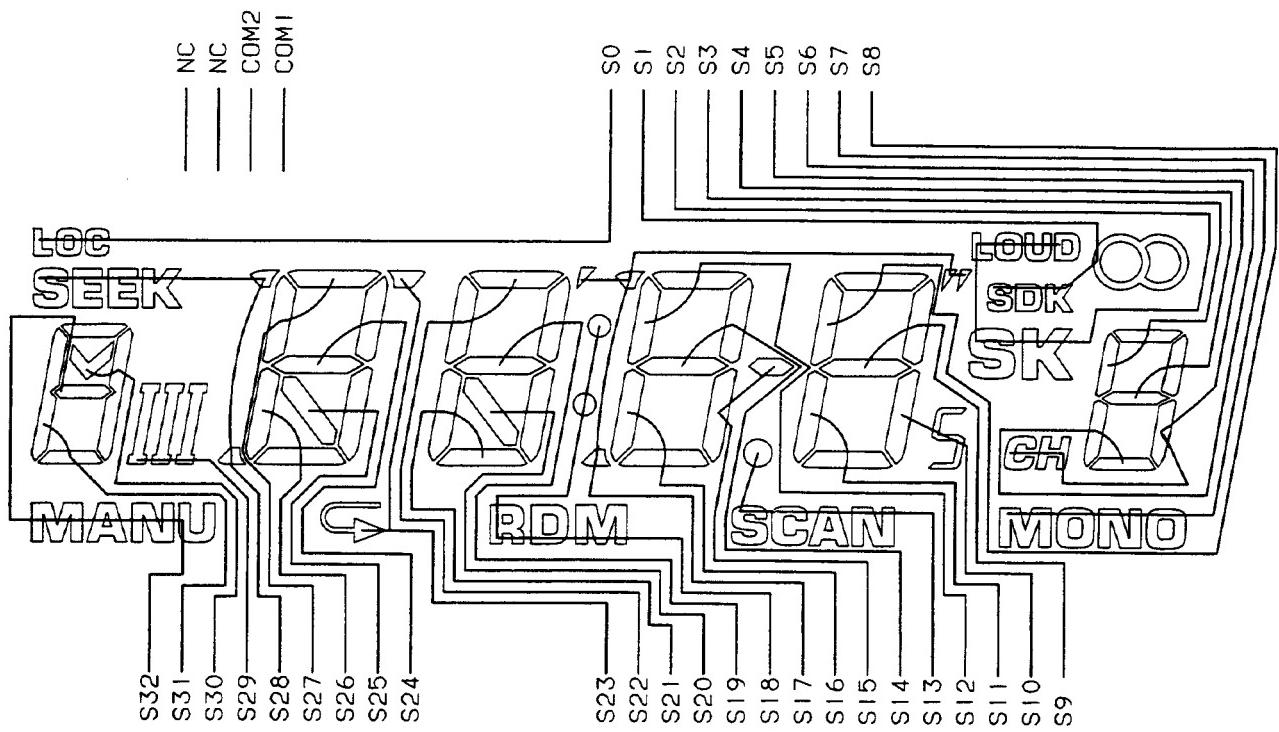


NOTE:
 *WR : Chip Resistor
 *C1 : Chip Capacitor
 *D1 : Chip Diode
 *T1 : Chip Transistor

Decimal points for resistor and capacitor
 fixed values are expressed as:
 $2.2=2R2$
 $0.022=R022$

• LCD (CAW1074)

SEGMENT



COMMON

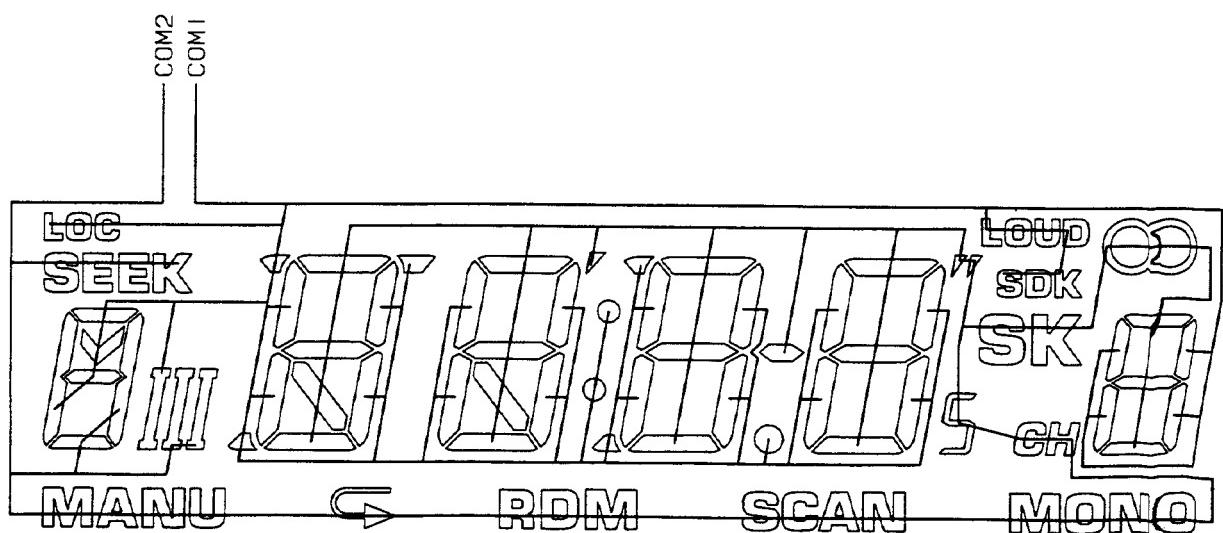
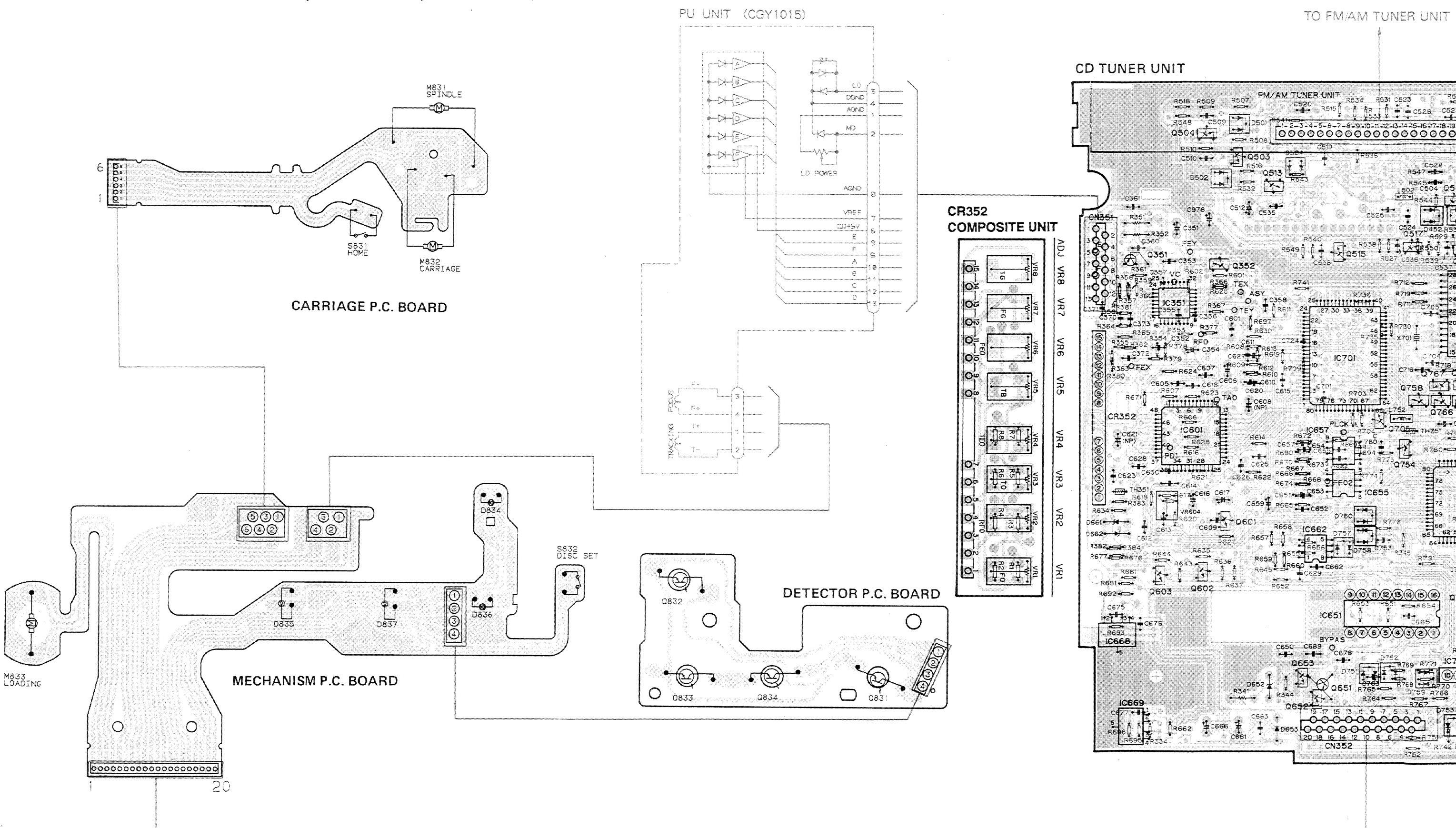
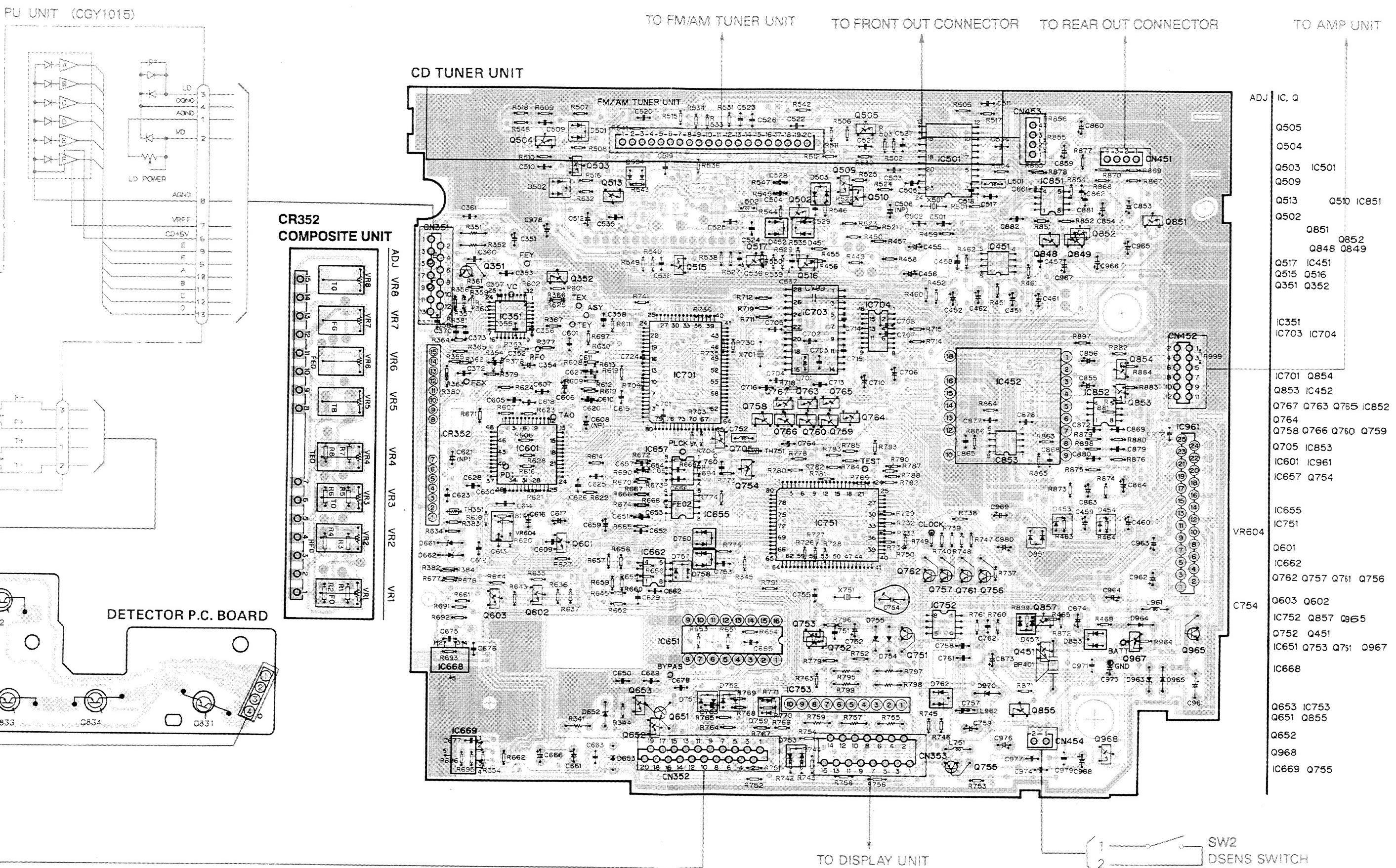


Fig. 48

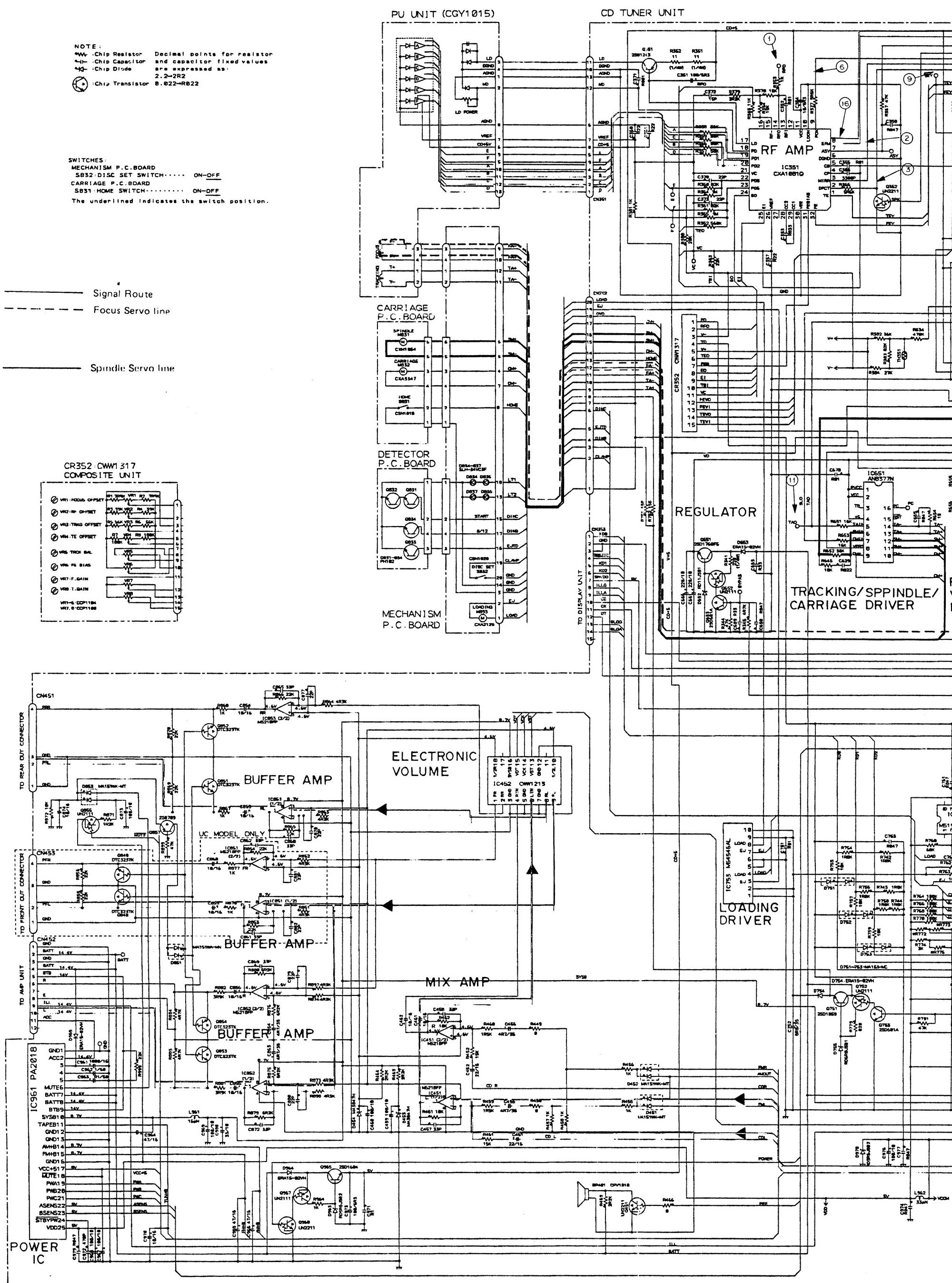
10. CONNECTION DIAGRAM (DEH-770/UC, DEH-85/US, DEH-760/UC, DEH-710/ES)

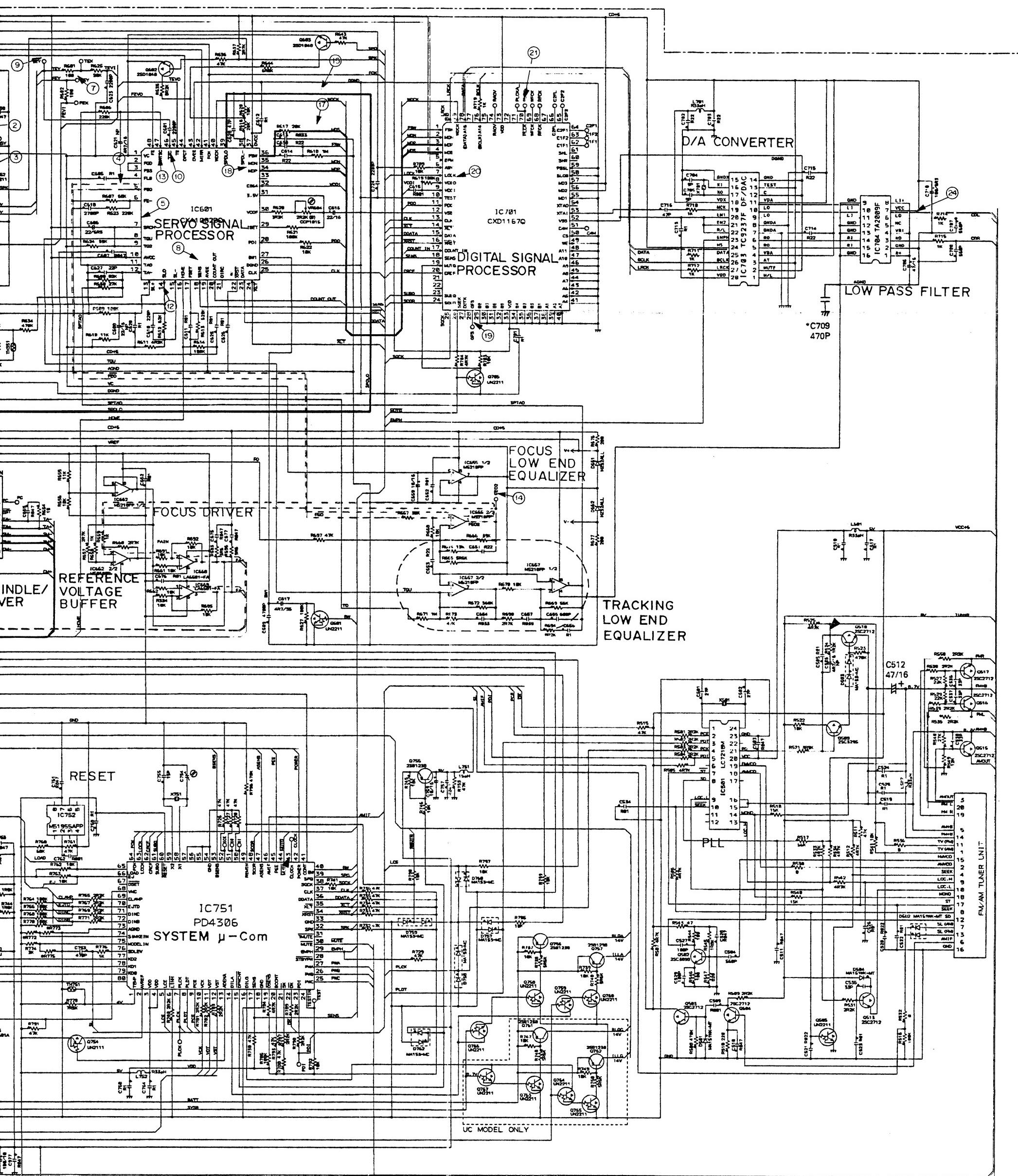


H-760/UC, DEH-710/ES)



12. SCHEMATIC CIRCUIT DIAGRAM





	UC MODEL	US MODEL	ES MODEL
*R772	VACANT	VACANT	3KΩ
*R773	0Ω	0Ω	510Ω
*R775	7R5KΩ	510Ω	510Ω
*C709	470P	470P	VACANT

11. SCHEMATIC CIRCUIT DIAGRAM /

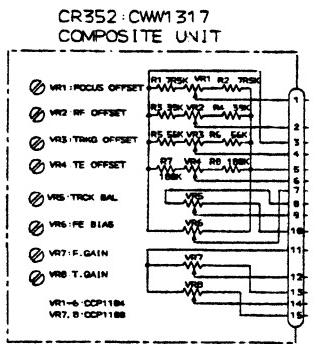
60/1

NOTE:
 *WW Chip Resistor Decimal points for resistor
 *CC Chip Capacitor and capacitor fixed values
 *DD Chip Diode are expressed as:
 2.2-2R2
 8.022-R022
 *TT Chip Transistor 8.022-R022

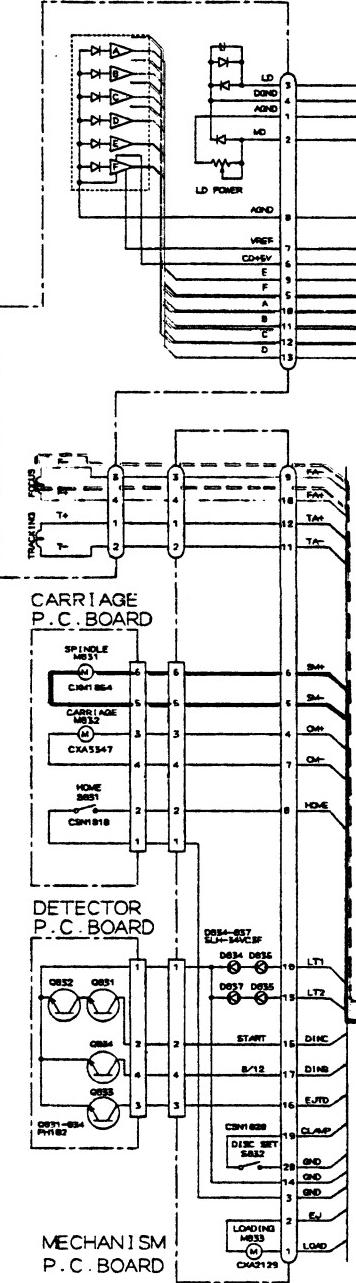
SWITCHES:
 MECHANISM P.C. BOARD
 SB32: DISC SET SWITCH - ON-OFF
 CARRIAGE P.C. BOARD
 SB31: HOME SWITCH - ON-OFF
 MISCELLANOUS
 SW2: DSENS SWITCH - ON-OFF

The underlined indicates the switch position.

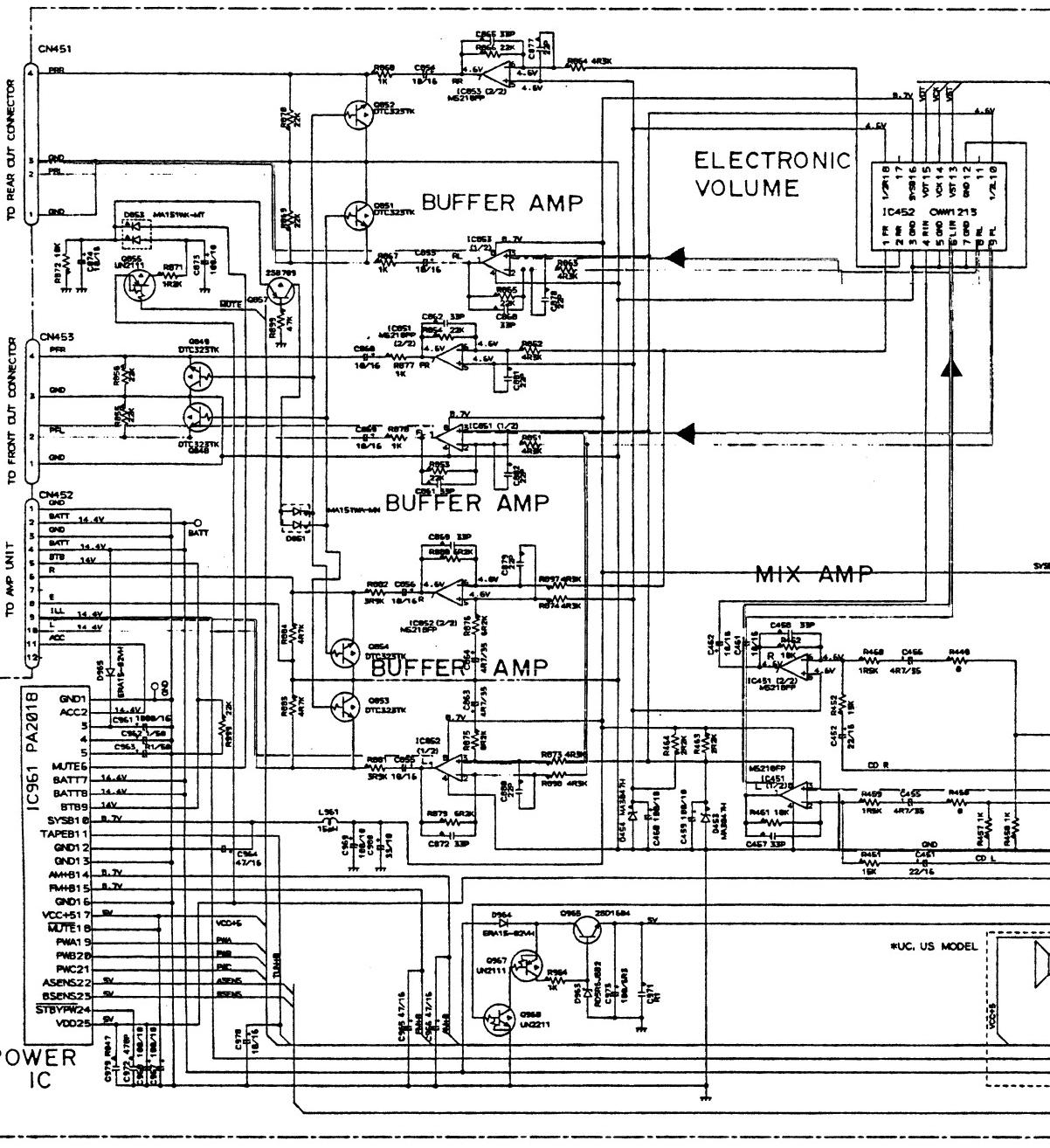
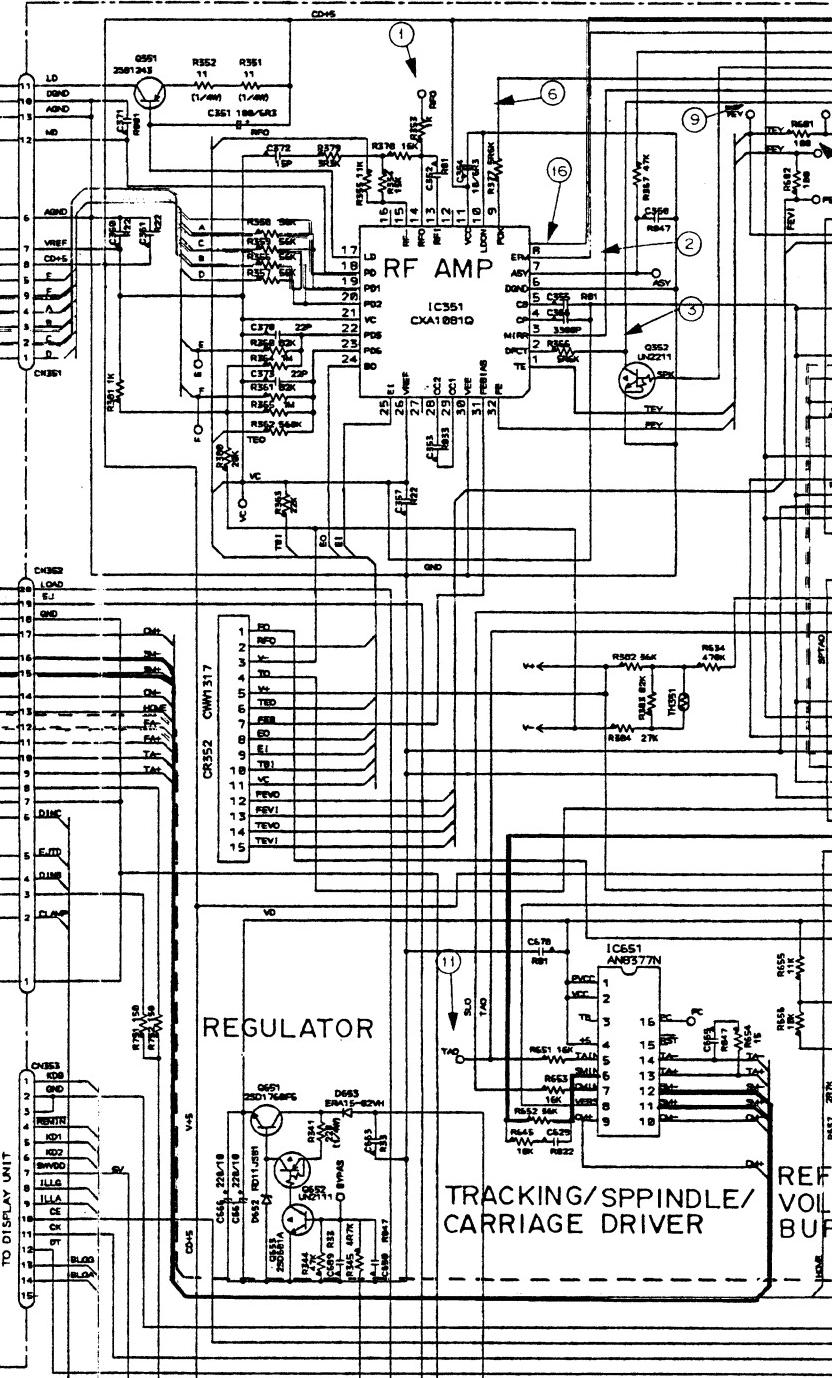
— Signal Route
 Focus Servo line
 — Spindle Servo line

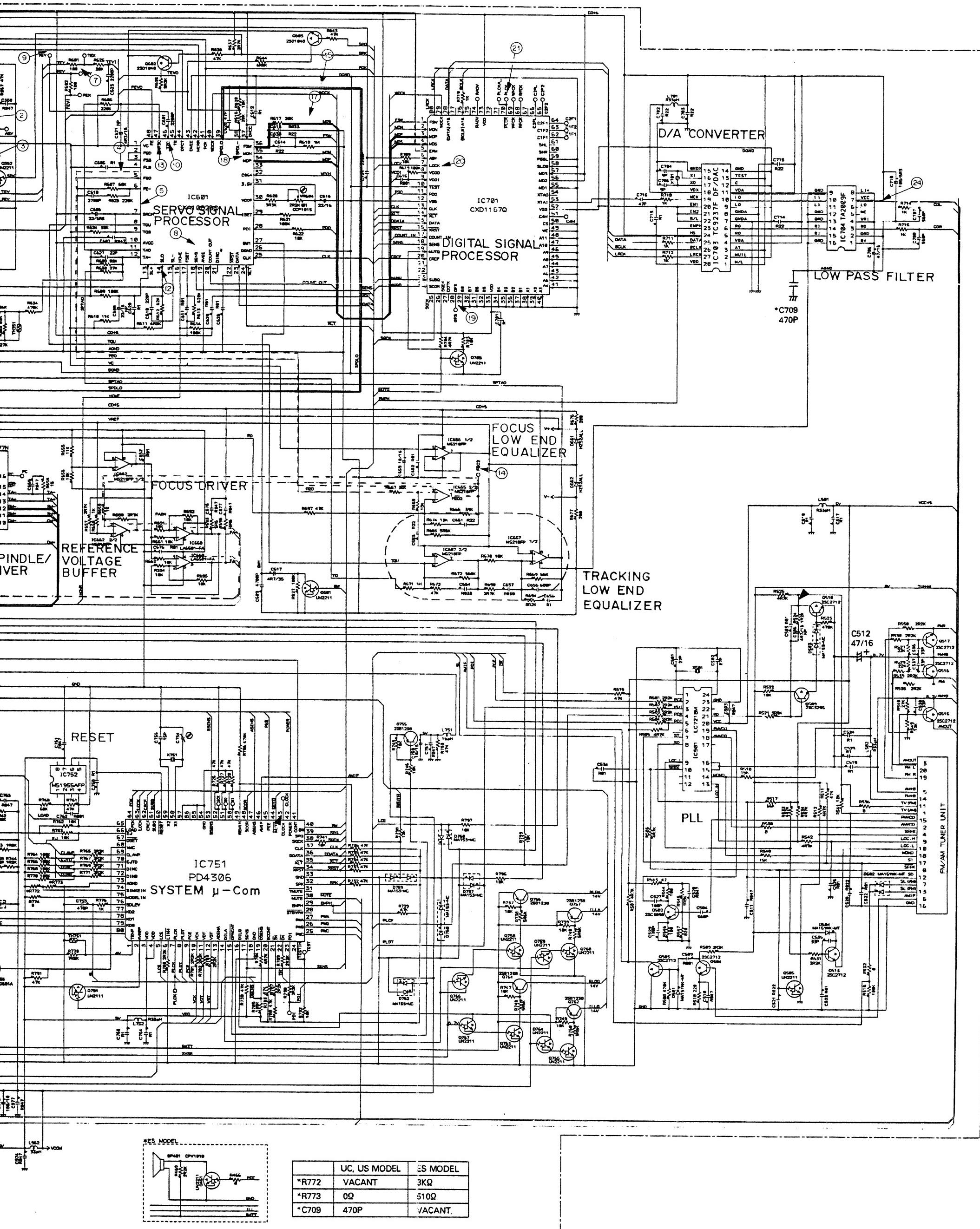


PU UNIT (CGY1015)

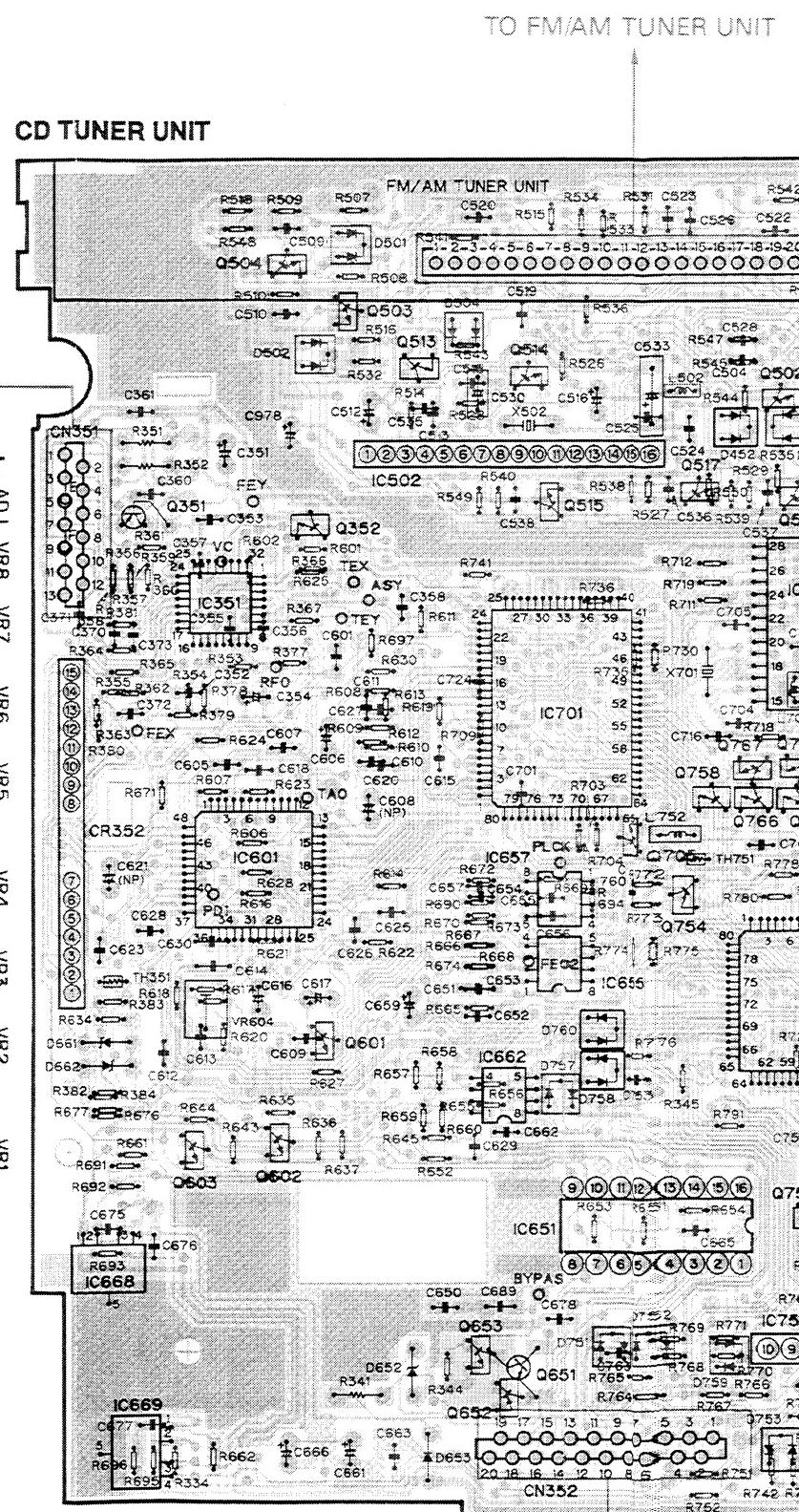
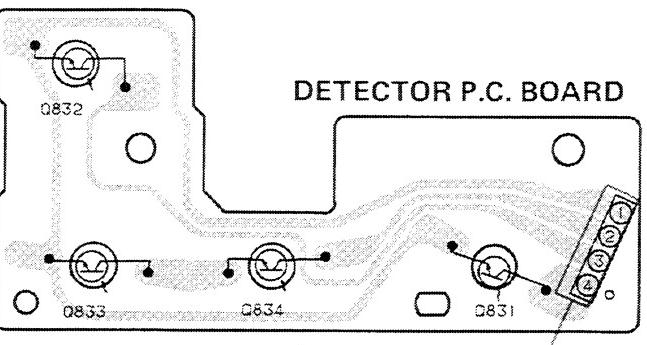
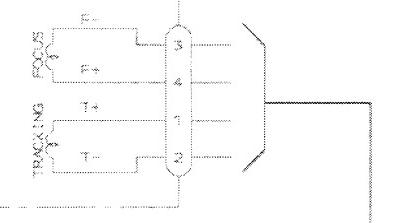
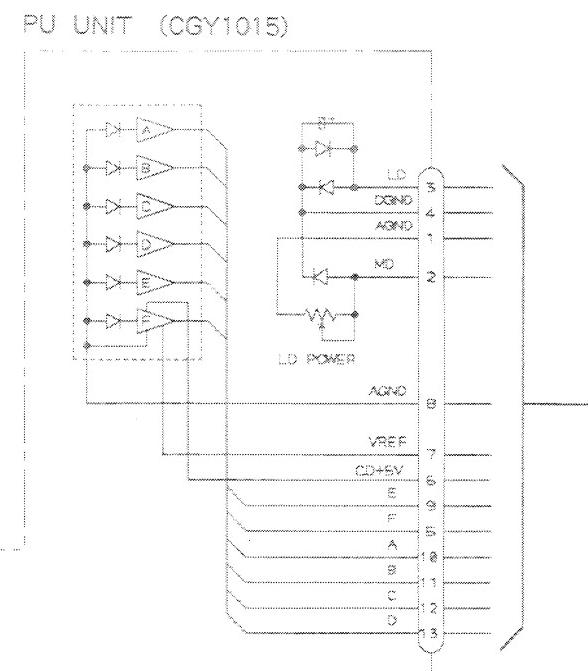
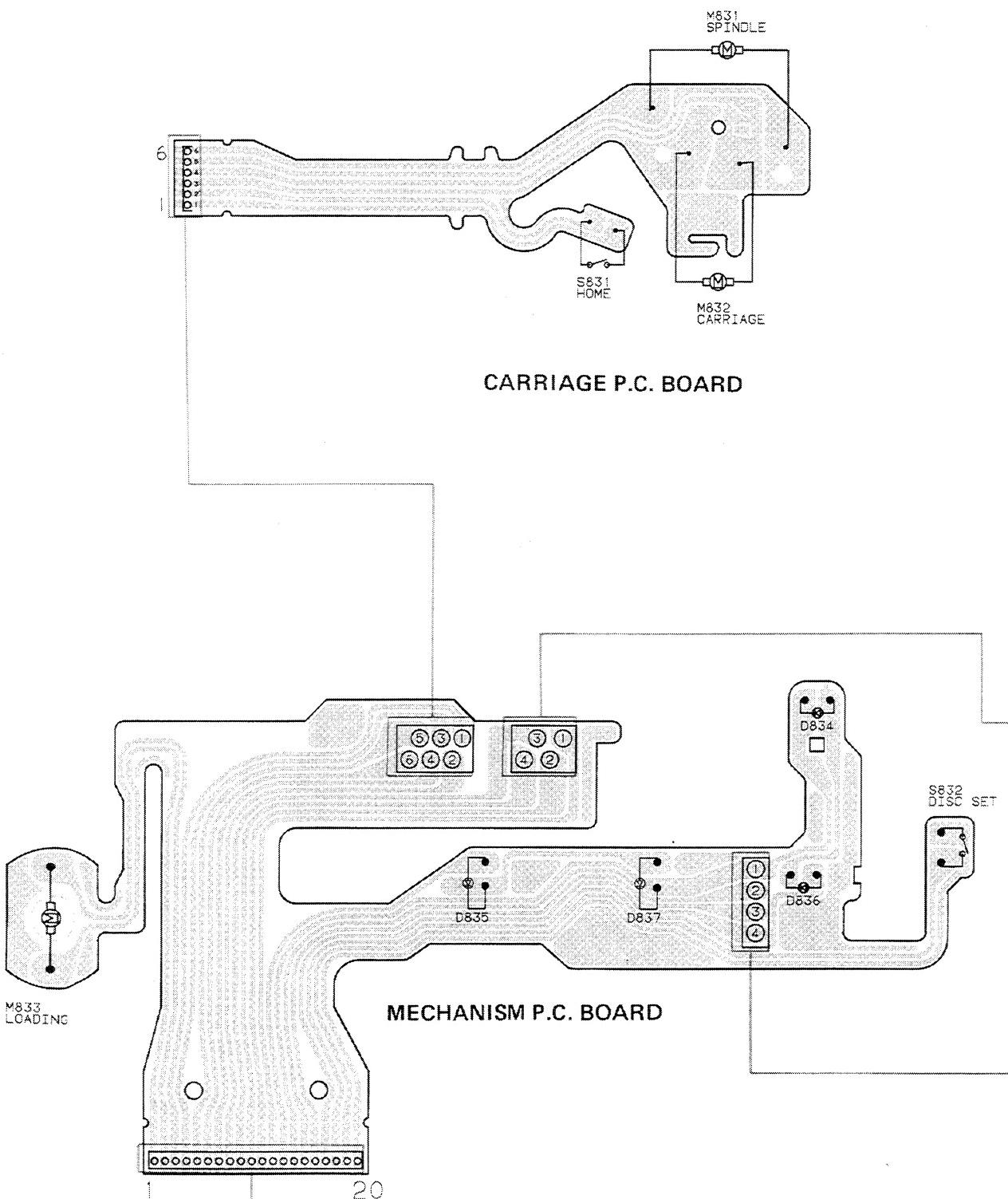


CD TUNER UNIT





14. CONNECTION DIAGRAM (DEH-770SDK/WG, DEH-760SDK/WG)



<WG)

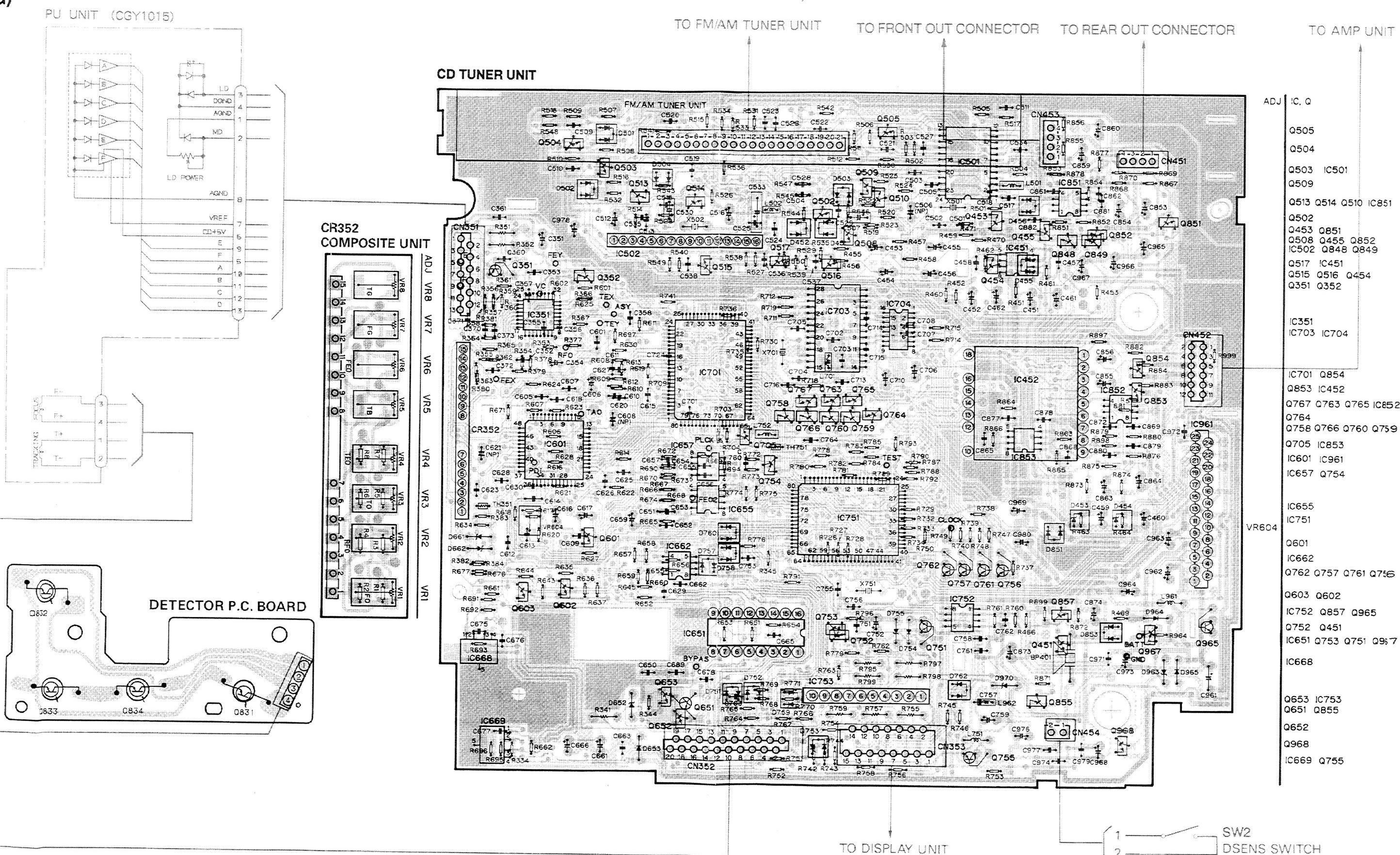
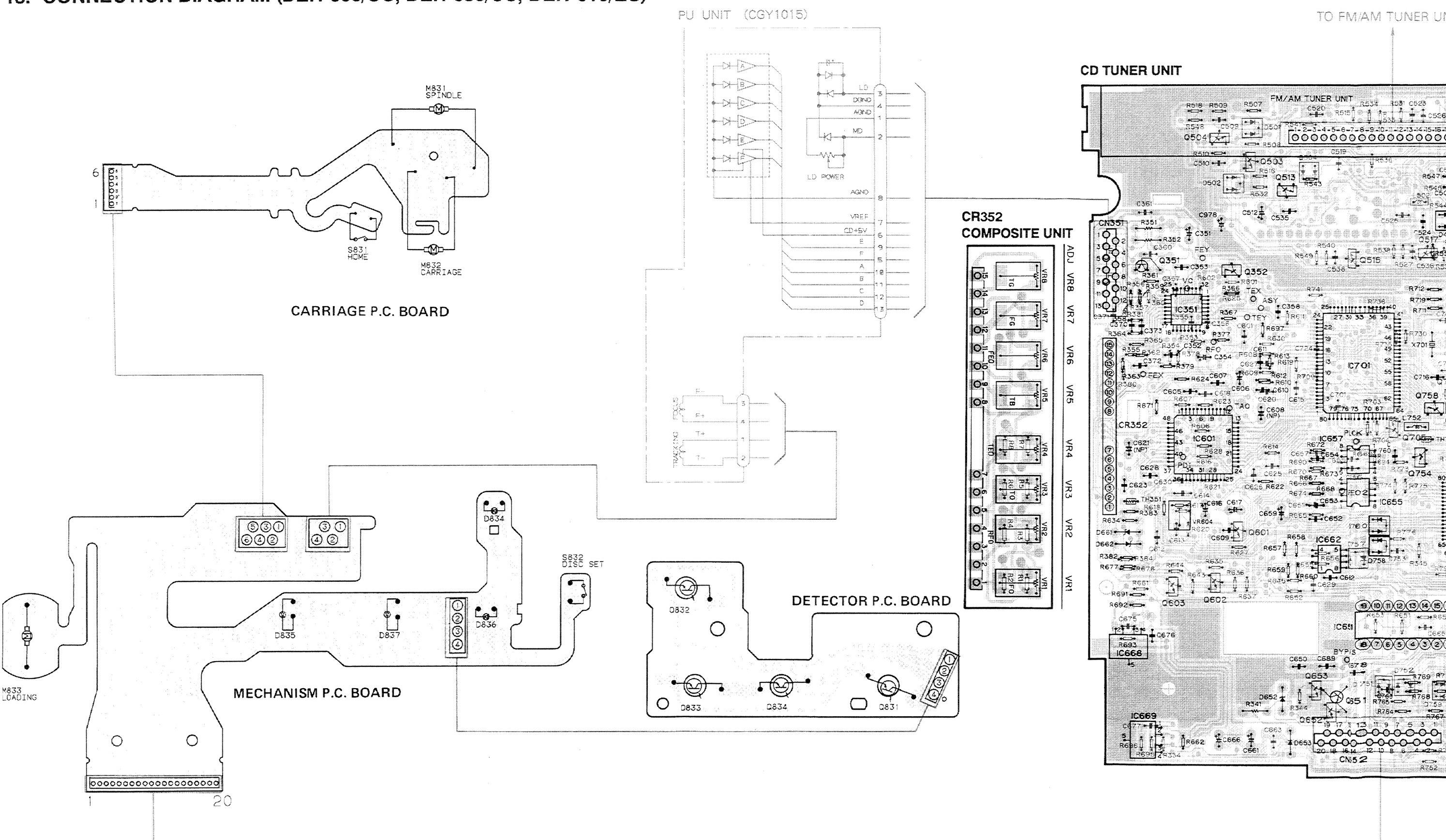


Fig. 53

13. CONNECTION DIAGRAM (DEH-660/UC, DEH-630/US, DEH-610/ES)



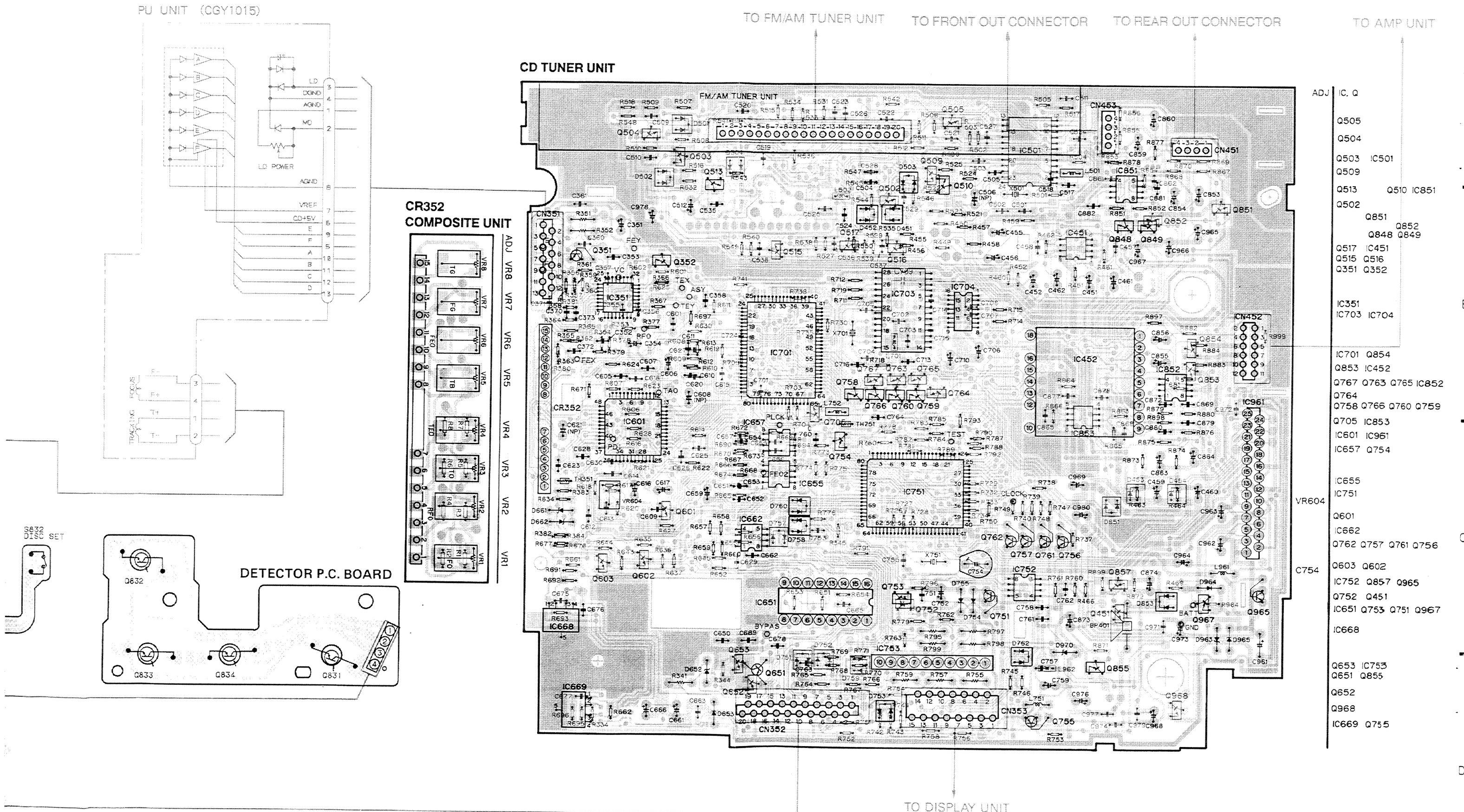
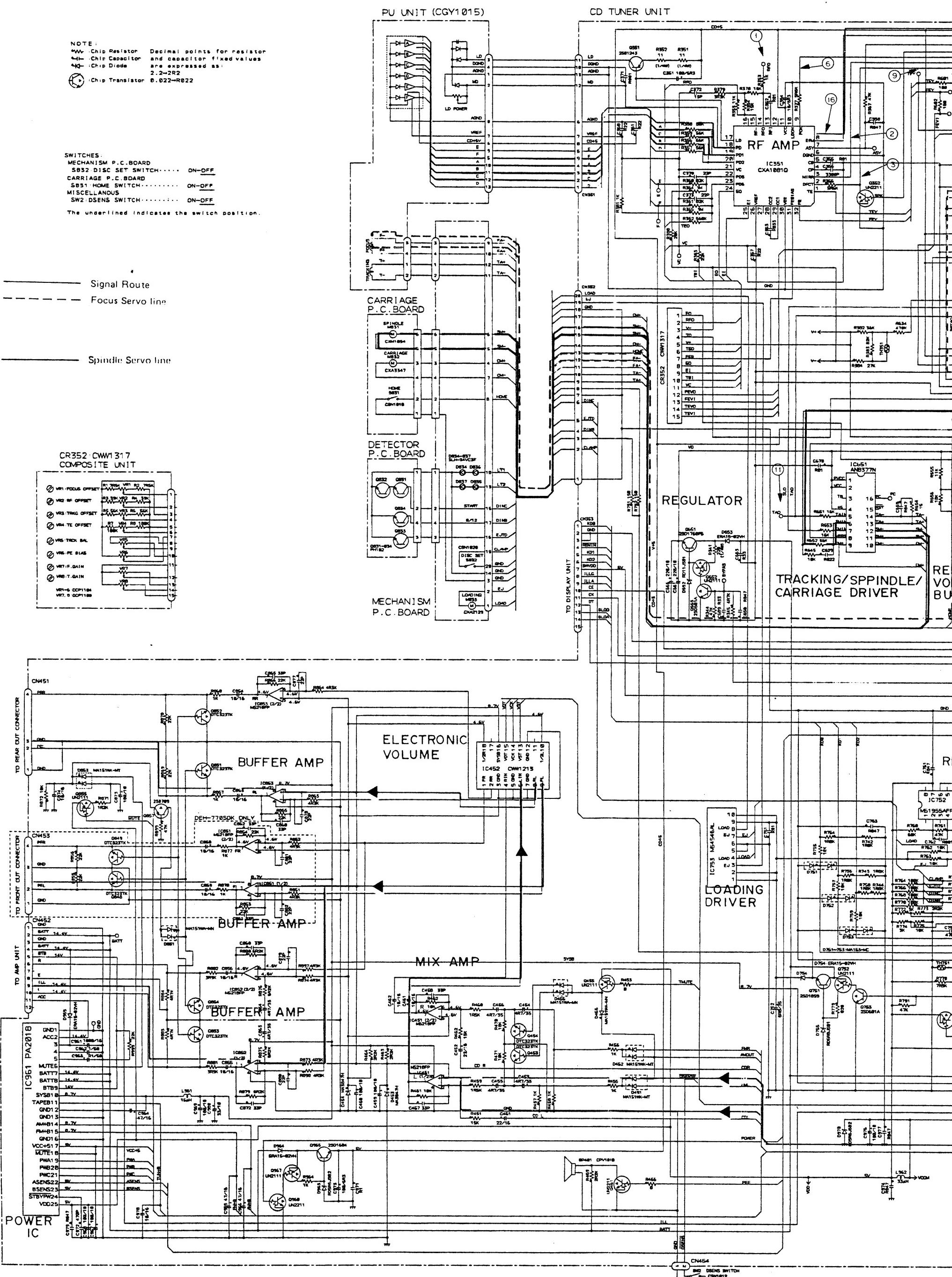


Fig. 52

15. SCHEMATIC CIRCUIT DIAGRAM (DEH-770SDK/WG)



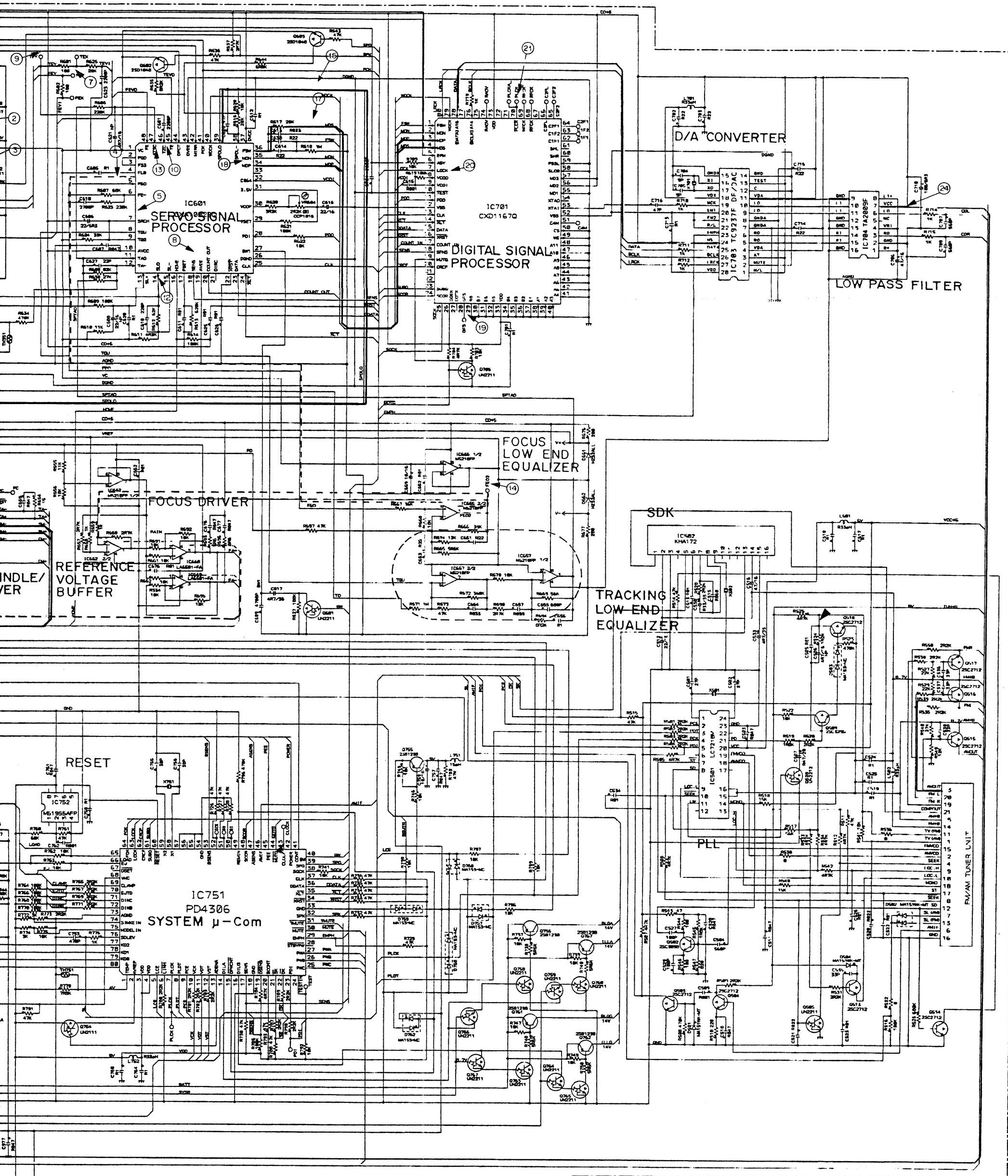
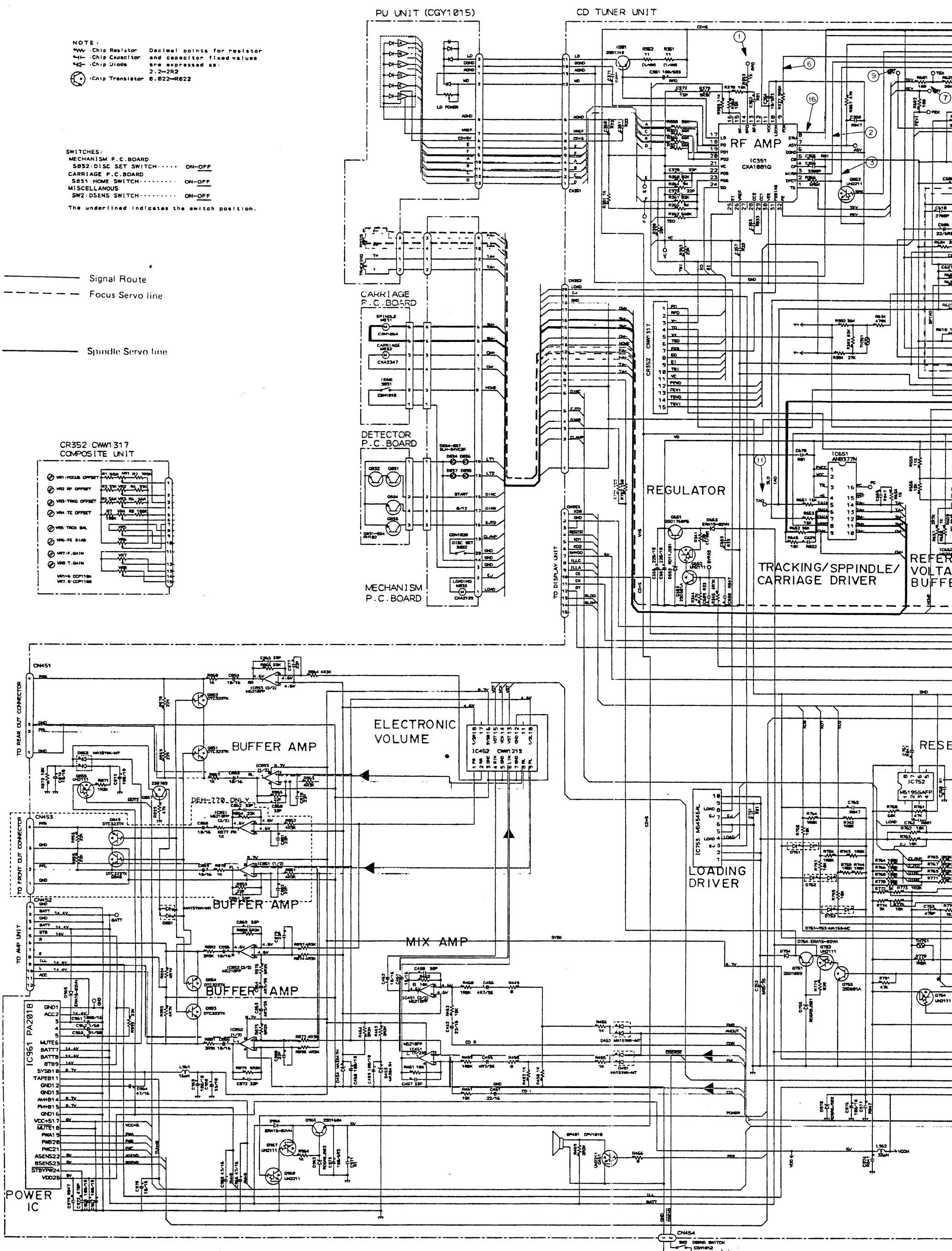


Fig. 54

16. SCHEMATIC CIRCUIT DIAGRAM (DEH-770/EW)



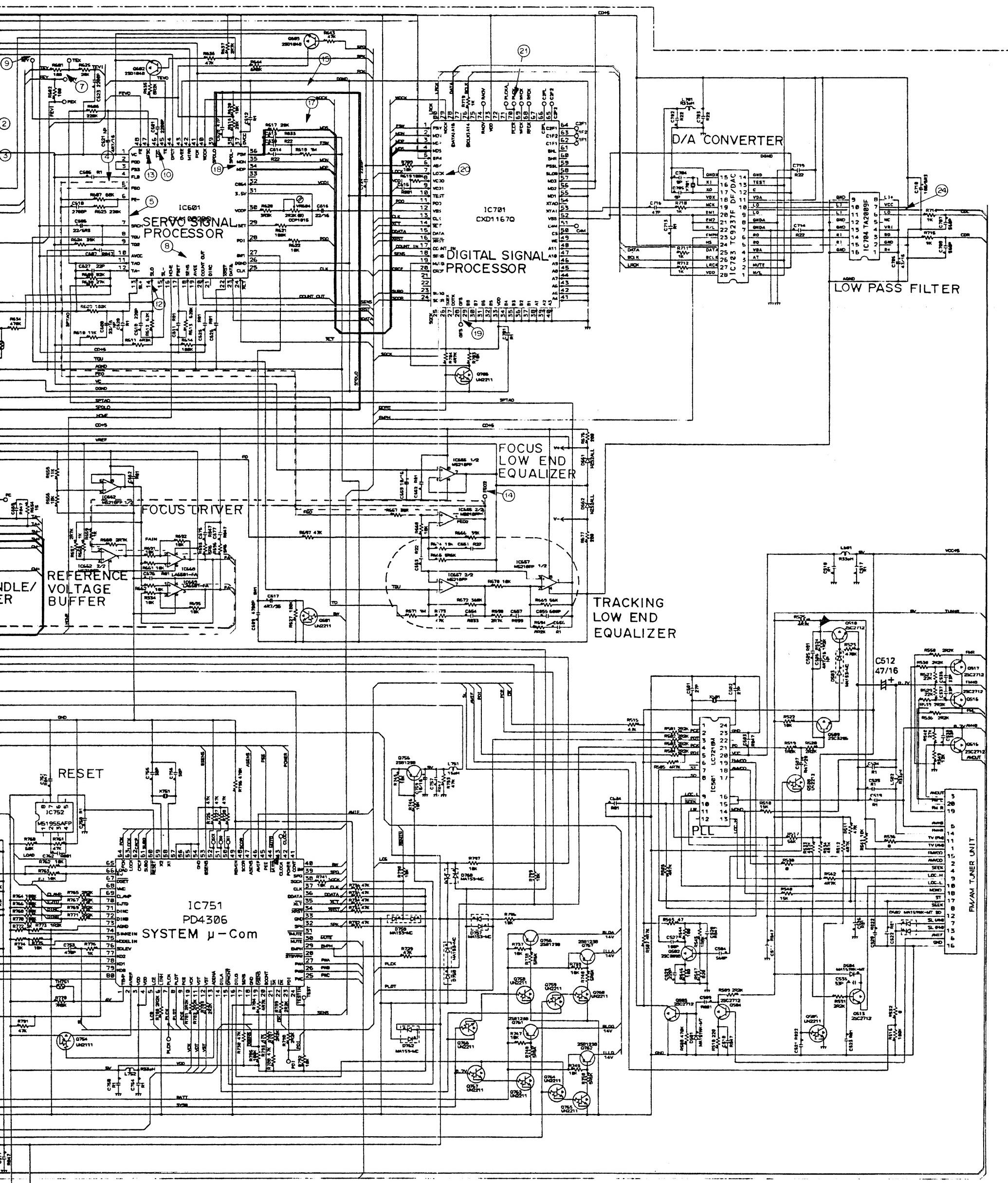
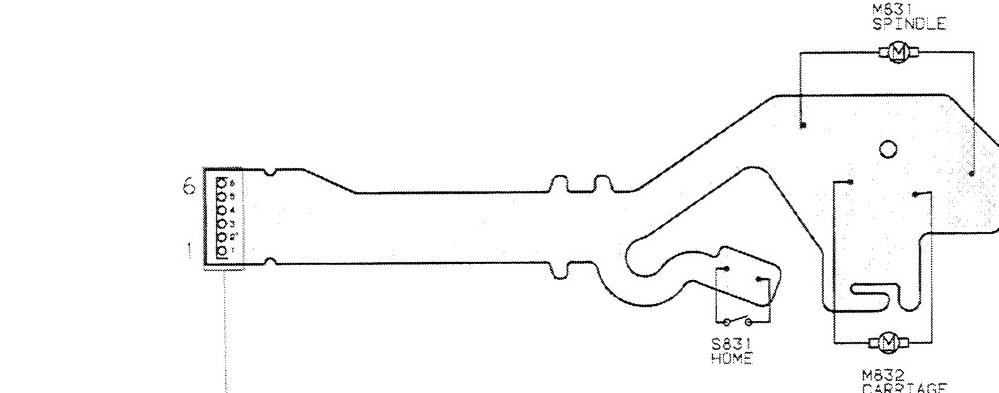


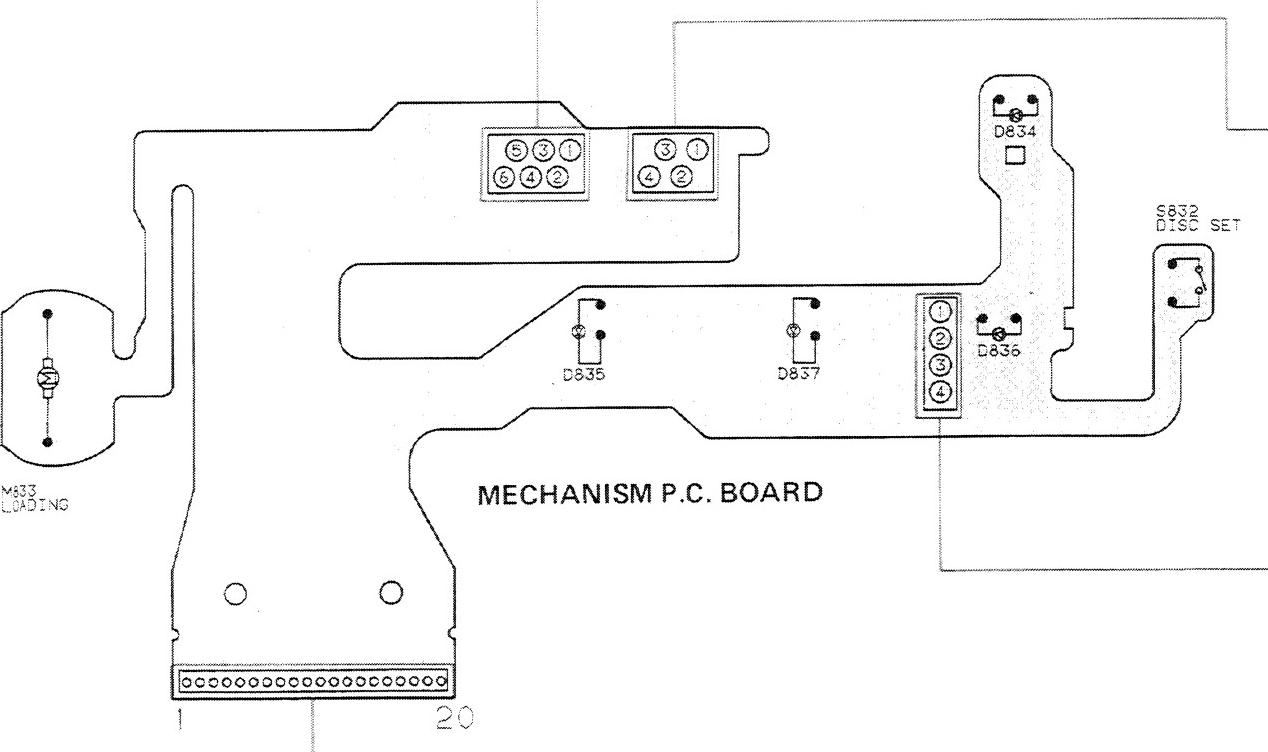
Fig. 55

17. CONNECTION DIAGRAM (DEH-770/EW, DEH-760/EW)

A

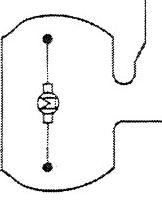


CARRIAGE P.C. BOARD



MECHANISM P.C. BOARD

B



C

D

E

F

G

H

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K

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N

O

P

Q

R

S

T

U

V

W

X

Y

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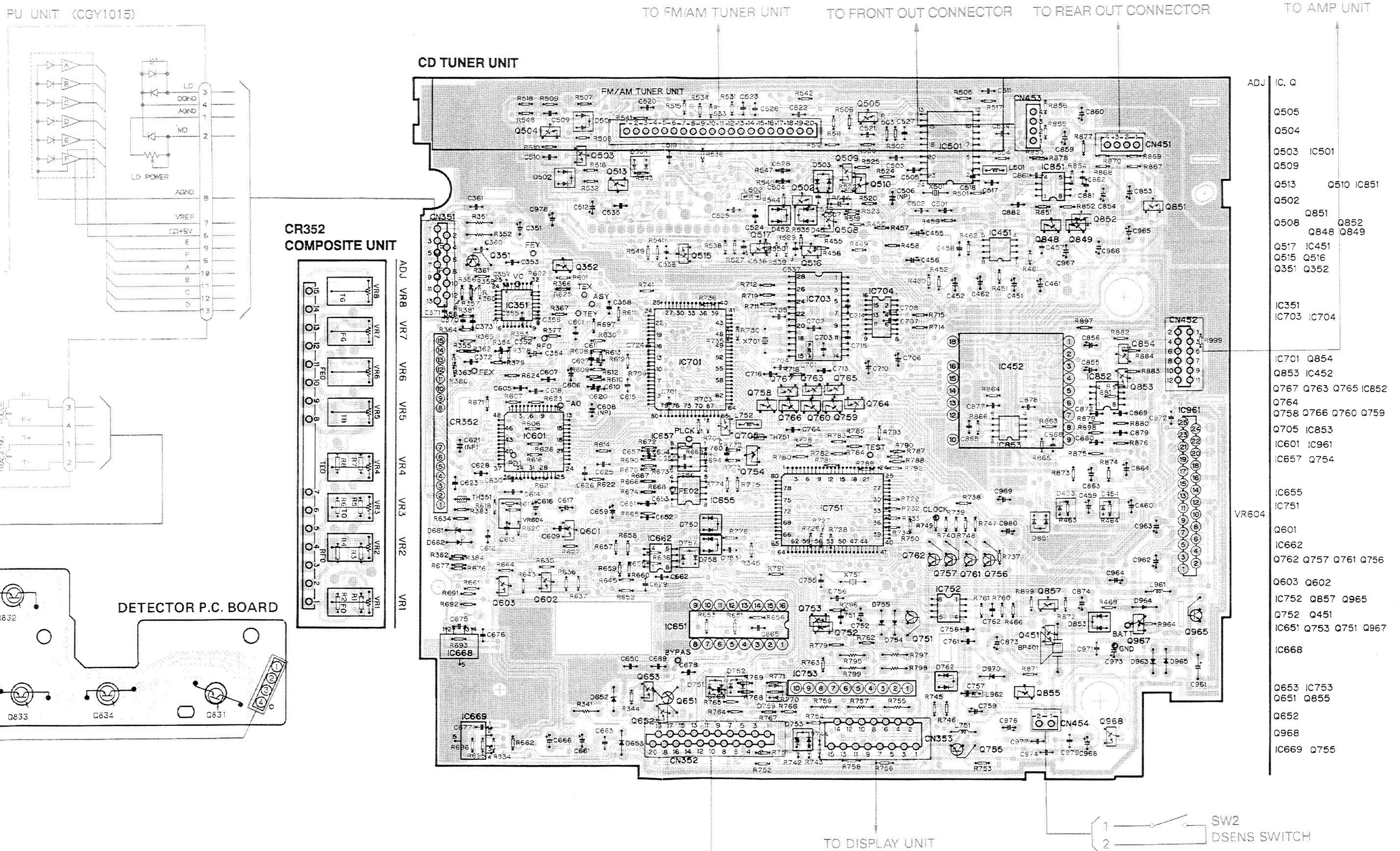


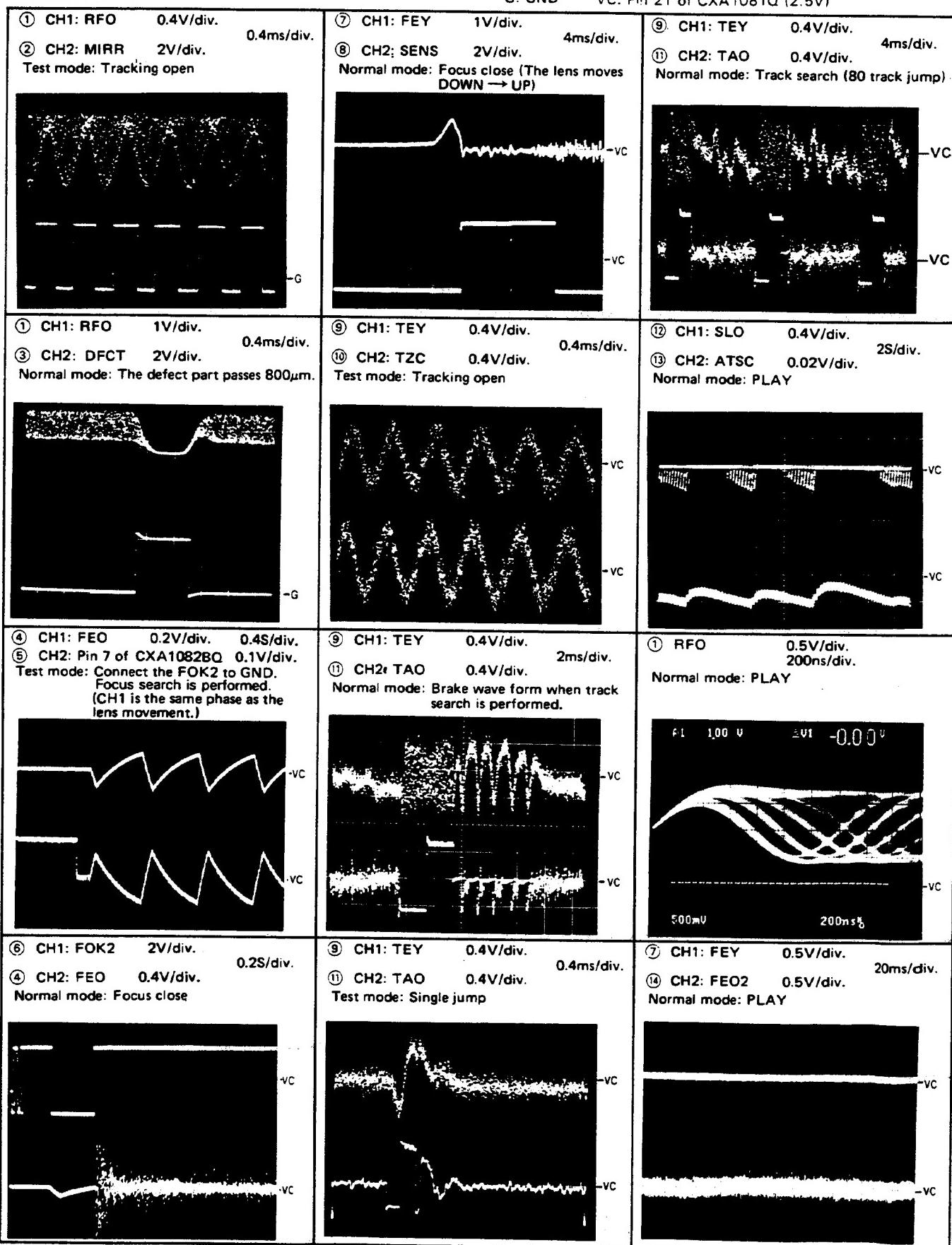
Fig. 56

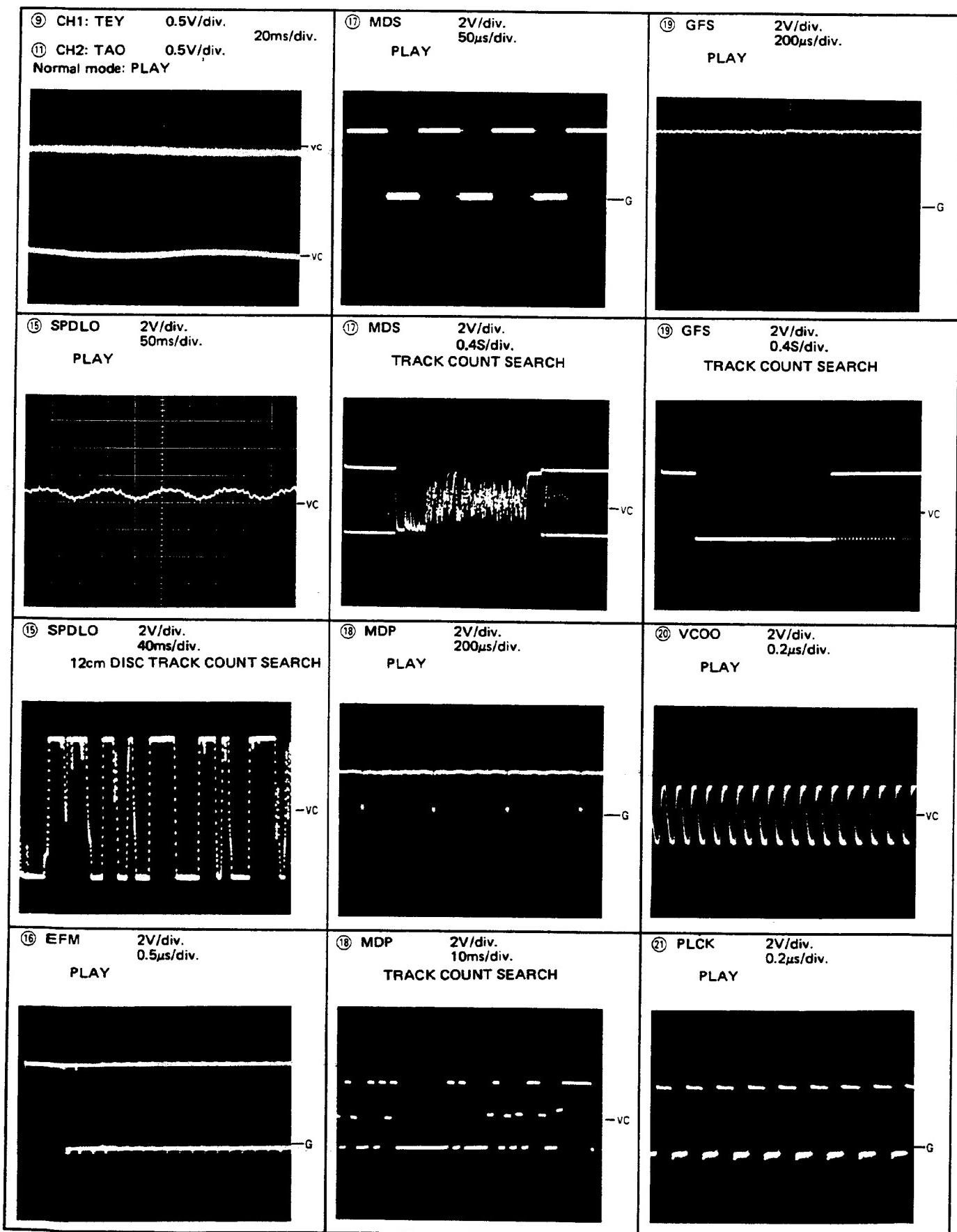
Note: 1. The encircled numbers denote measuring points in the circuit diagram.

2. Reference voltage

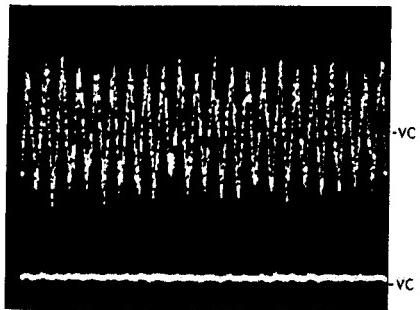
G: GND VC: Pin 21 of CXA1081Q (2.5V)

● Wave Forms

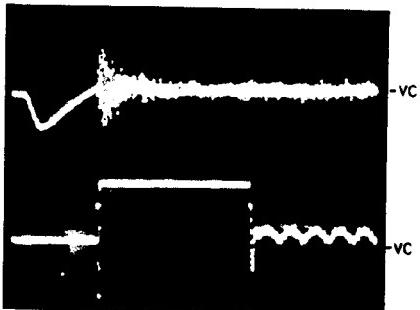




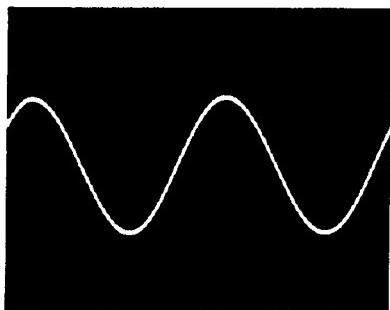
⑨CH1 : TEY 0.4V/div. 0.2ms/div.
⑩CH2 : TAO 0.4V/div.
TRACK COUNT SEARCH



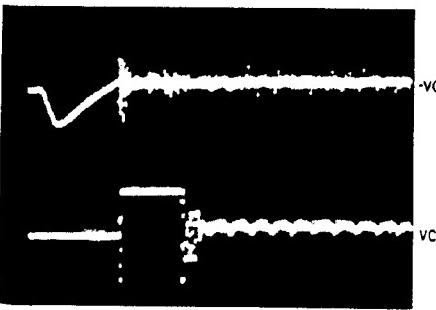
⑪CH1 : FEO2 1V/div. 0.2S/div.
⑫CH2 : SPDLO 1V/div.
After 12cm disc loaded



⑬L or R out 0.5V/div. 0.2ms/div.
PLAY (When 1kHz FS)



⑭CH1 : FEO2 1V/div. 0.2S/div.
⑮CH2 : SPDLO 1V/div.
After 8cm disc loaded



18. CIRCUIT DIAGRAM AND P.C. BOARD PATTERN

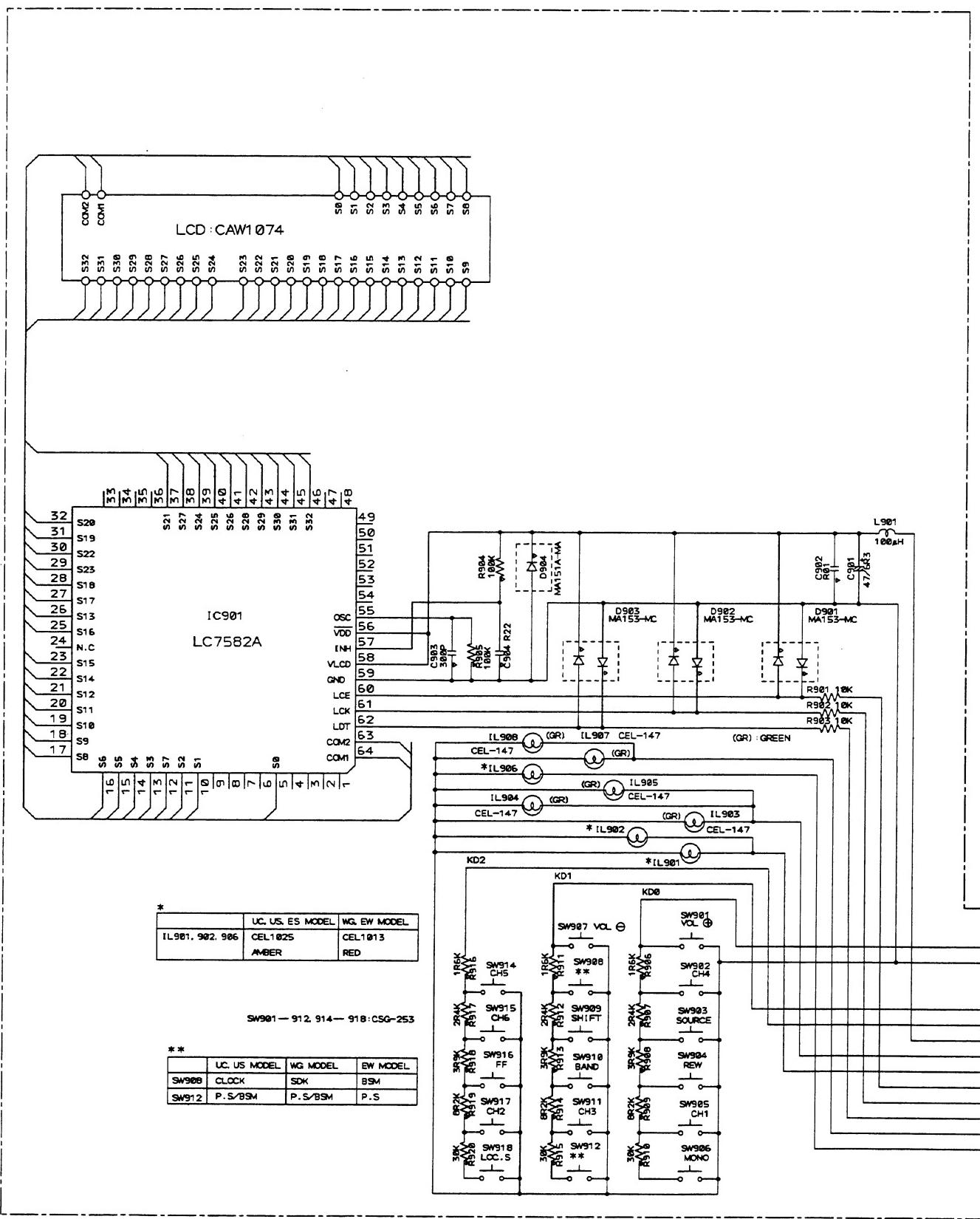
● DEH-770/UC, DEH-85/US, DEH-710/ES, DEH-770SDK/WG, DEH-770/EW

NOTE :

- ◆ WR : Chip Resistor Decimal points for resistor
- ◆ RC : Chip Capacitor and capacitor fixed value
- ◆ RD : Chip Diode are expressed as :
- ' 2.2 → R22
- ◆ TR : Chip Transistor $0.022 \rightarrow R022$

A

DISPLAY UNIT



FRONT OUT

AMP UNIT

CD TUNER UNIT

POWER AMP

IC551 AN718BK

COMPOSITE PART

P.C. BOARD

CN453

CN452

CN353

CN352

FRONT R

Rch E

FRONT L

Lch E

B REMOTE

FUSE 0.5A

ACC0

FUSE 6A

ILM

GND

R+

L-

L+

CN951

ERA15-82VH

D956 ERA15-82VH

R956

R957 2K

D955

C956 1.5K

ERA15-82VH

D952

C954 1.5K

C951 C9186

D951

C952 22000/15

C953 22000/15

D954 ERA15-82VH

C955 1.5K

R955

C956 22000/15

D957 D959 ERC04-02FE3

CN952

GND

BATT

GND

BATT

BTB

R

NC

E

ILL

L

ACC

CN453

FRONT R

Rch E

FRONT L

Lch E

IC1 : RS-28

REMOTE SENSOR

SW1 : CSG-253

SW1 EJECT

KD8 GND

KD1

KD2

SWDD

ILLG

ILLA

CE

CK

DT

BLGG

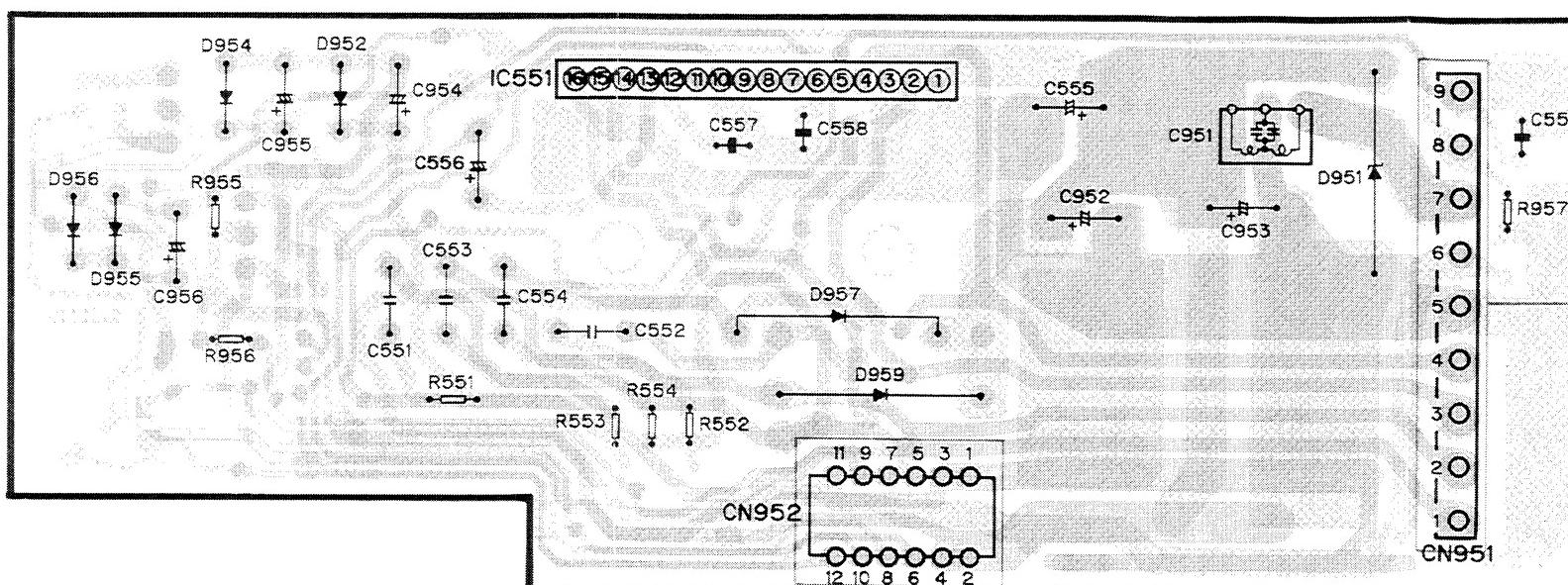
BLGA

R921 1K

AMP UNIT

1C. Q

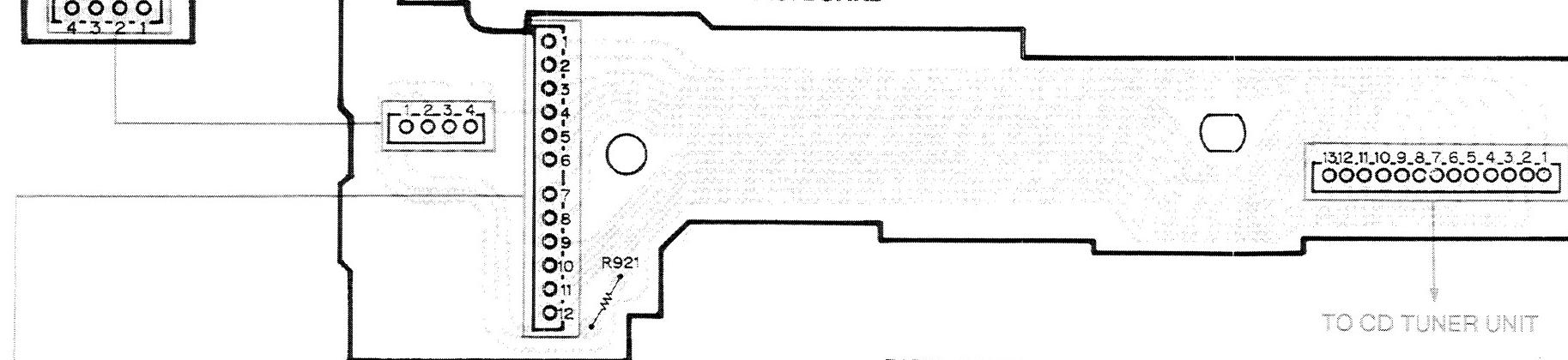
IC551



COMPOSITE PART



P.C. BOARD



DISPLAY UNIT

1C

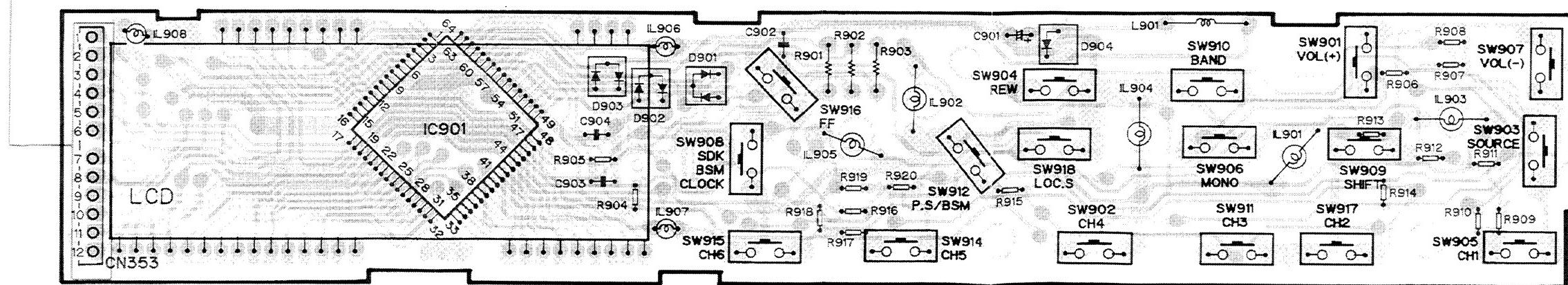


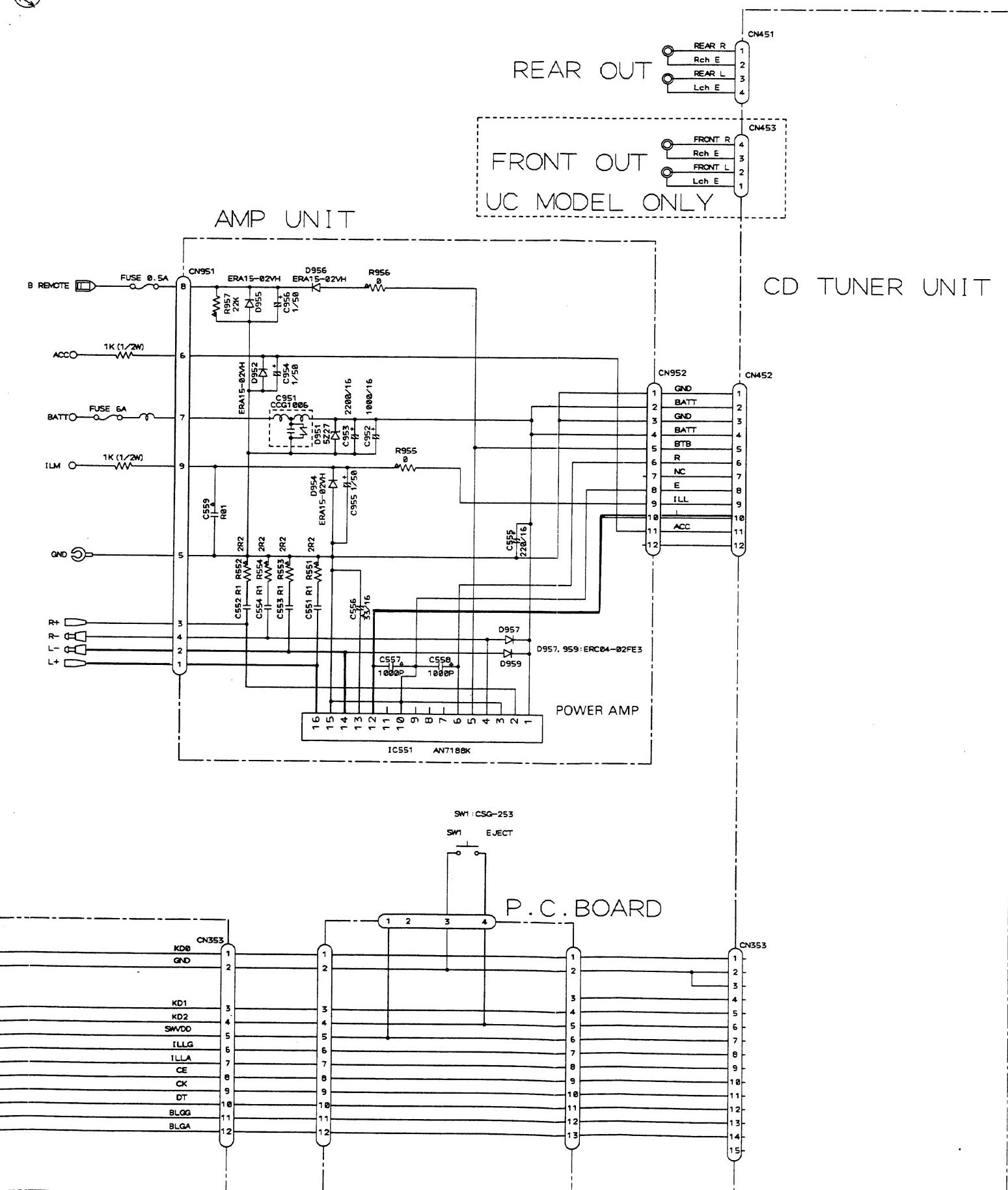
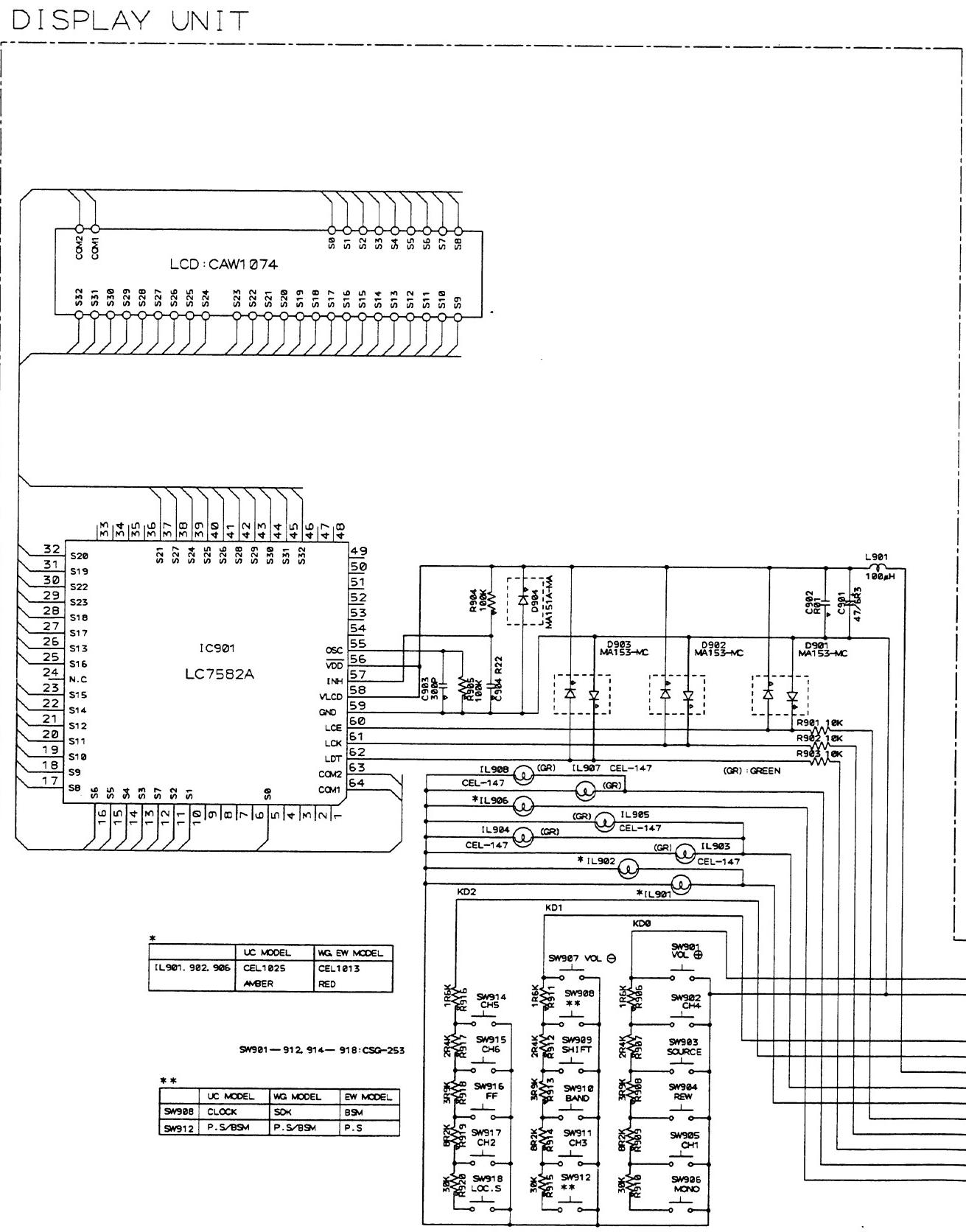
Fig. 58

● DEH-760/UC, DEH-760SDK/WG, DEH-760/EW

NOTE :

- **W**:Chip Resistor Decimal points for resistor
- **I**:Chip Capacitor and capacitor fixed value
- **D**:Chip Diode are expressed as:

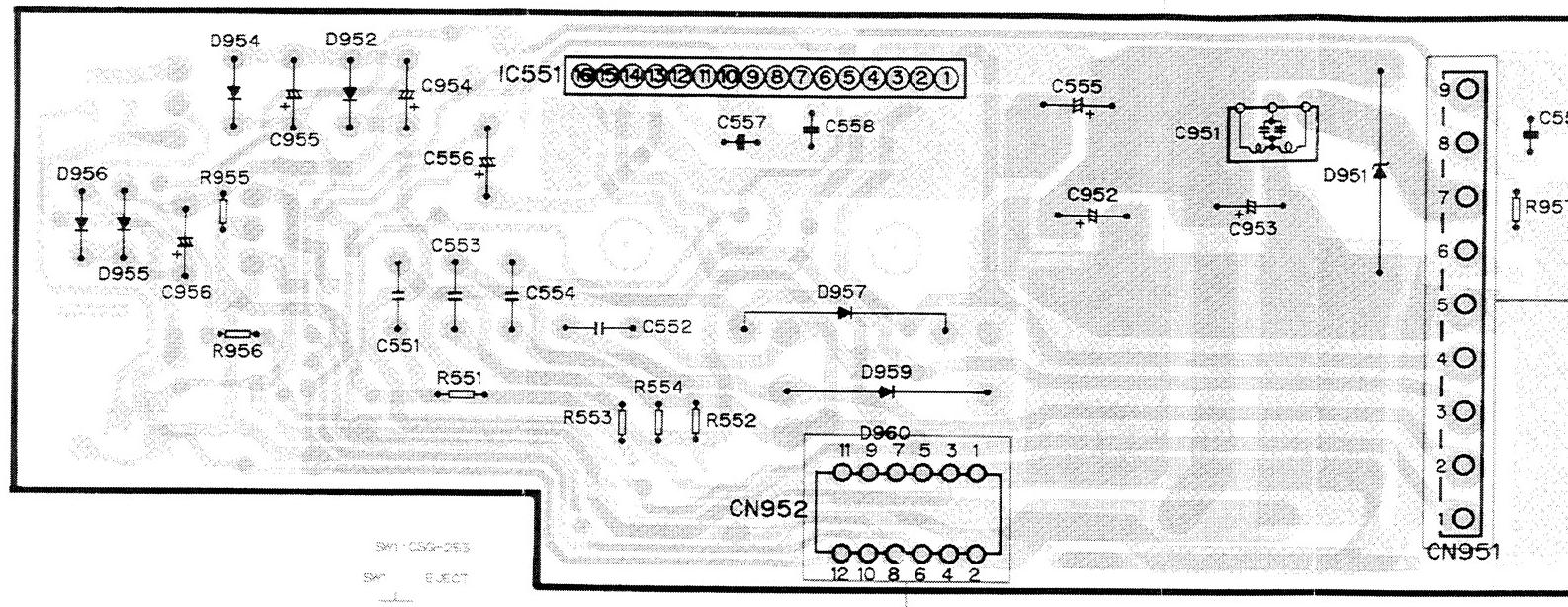
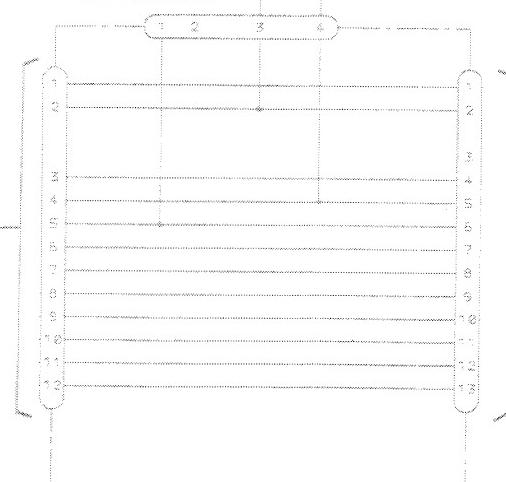
2 . 2 → 2R2
0 . 0 2 2 → R022



AMP UNIT

IC, Q

IC551

**P.C. BOARD****DISPLAY UNIT**

IC

IC901

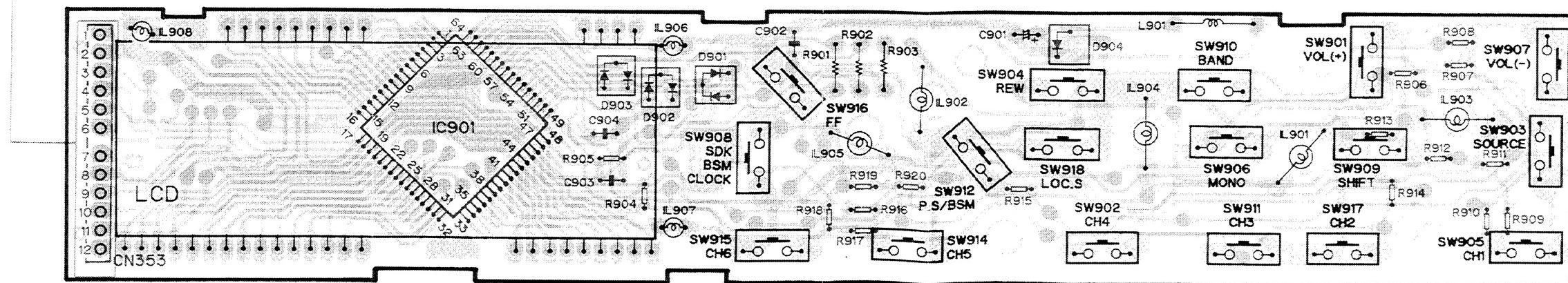


Fig. 60

●DEH-660/UC

1

2

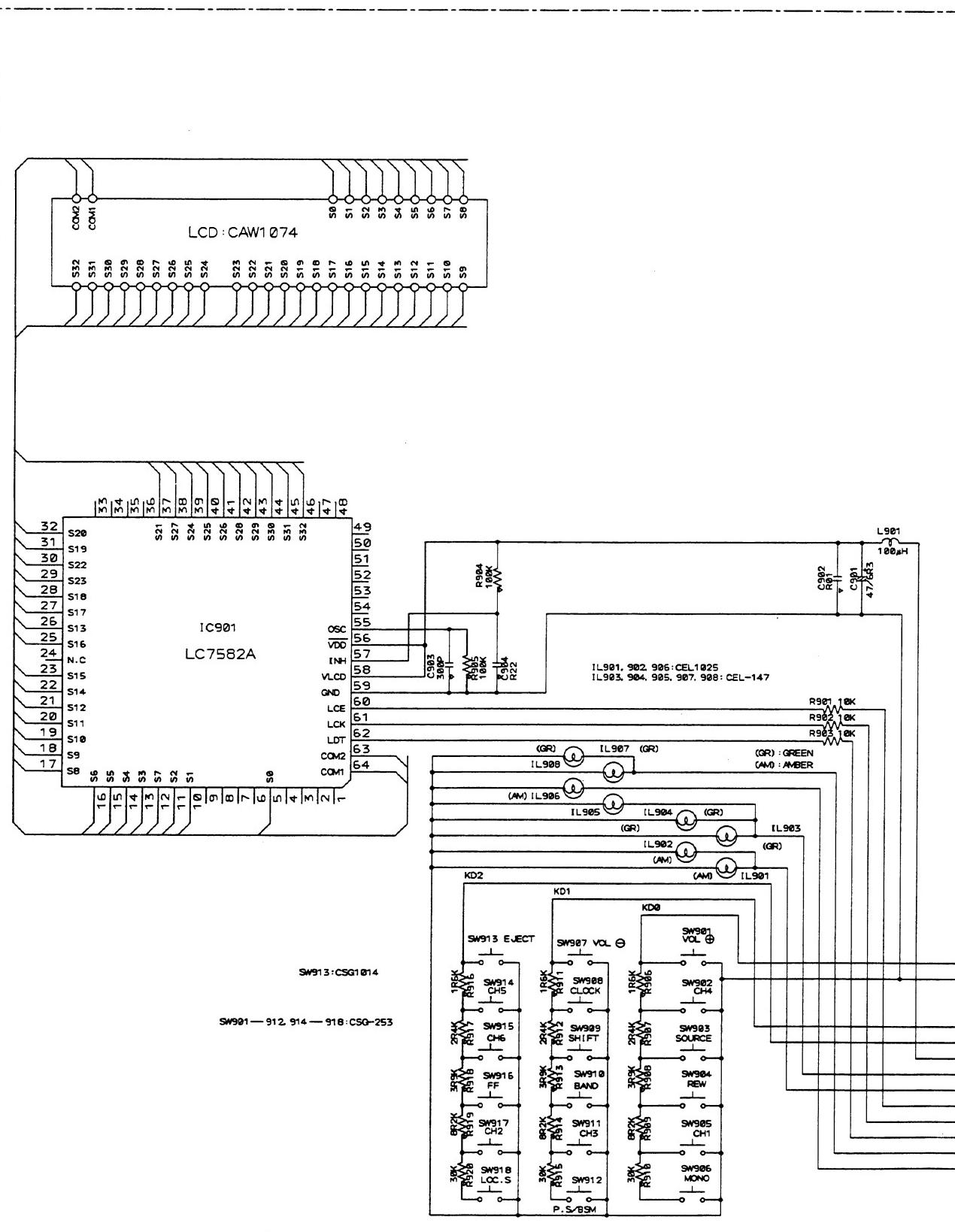
3

4

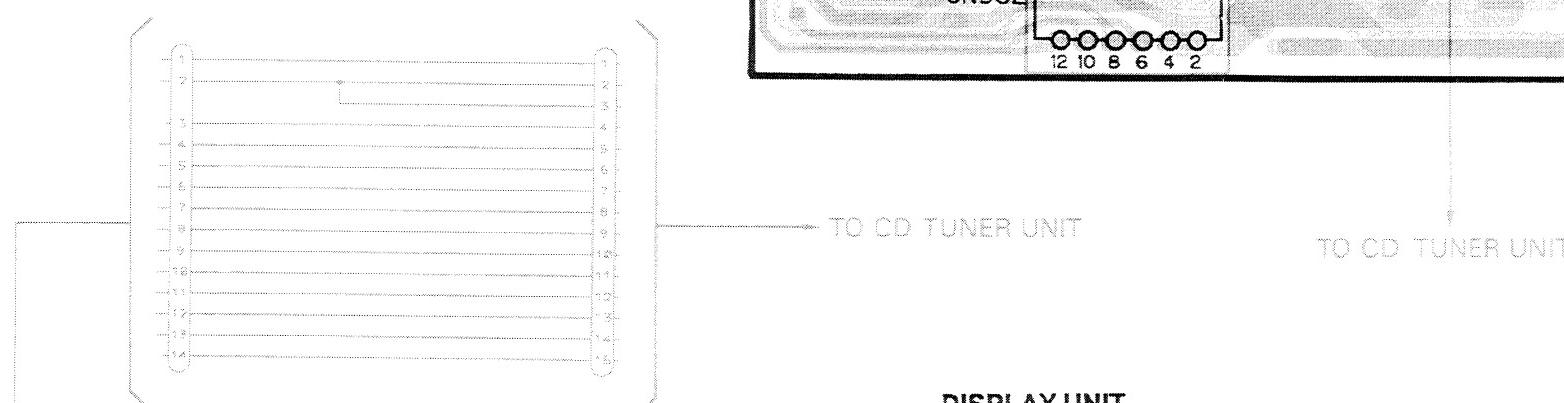
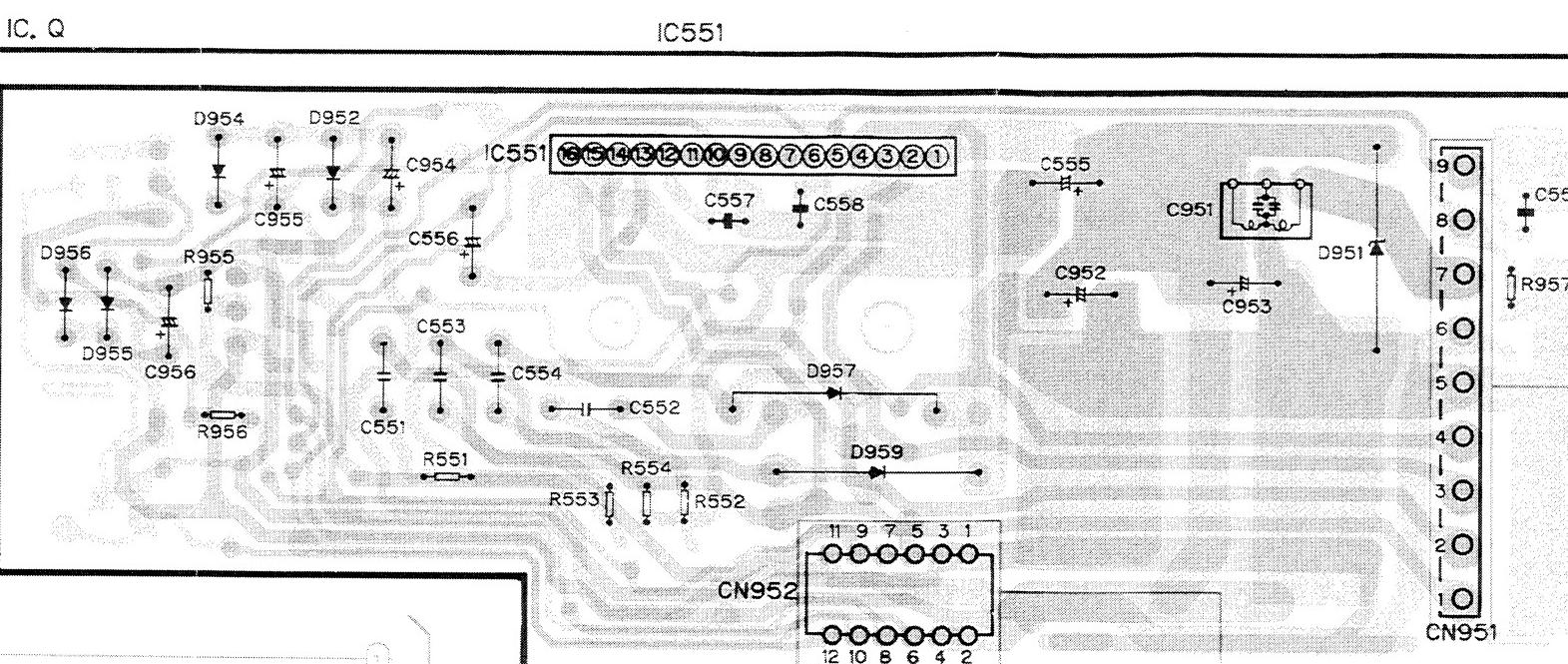
5

6

A DISPLAY UNIT



AMP UNIT

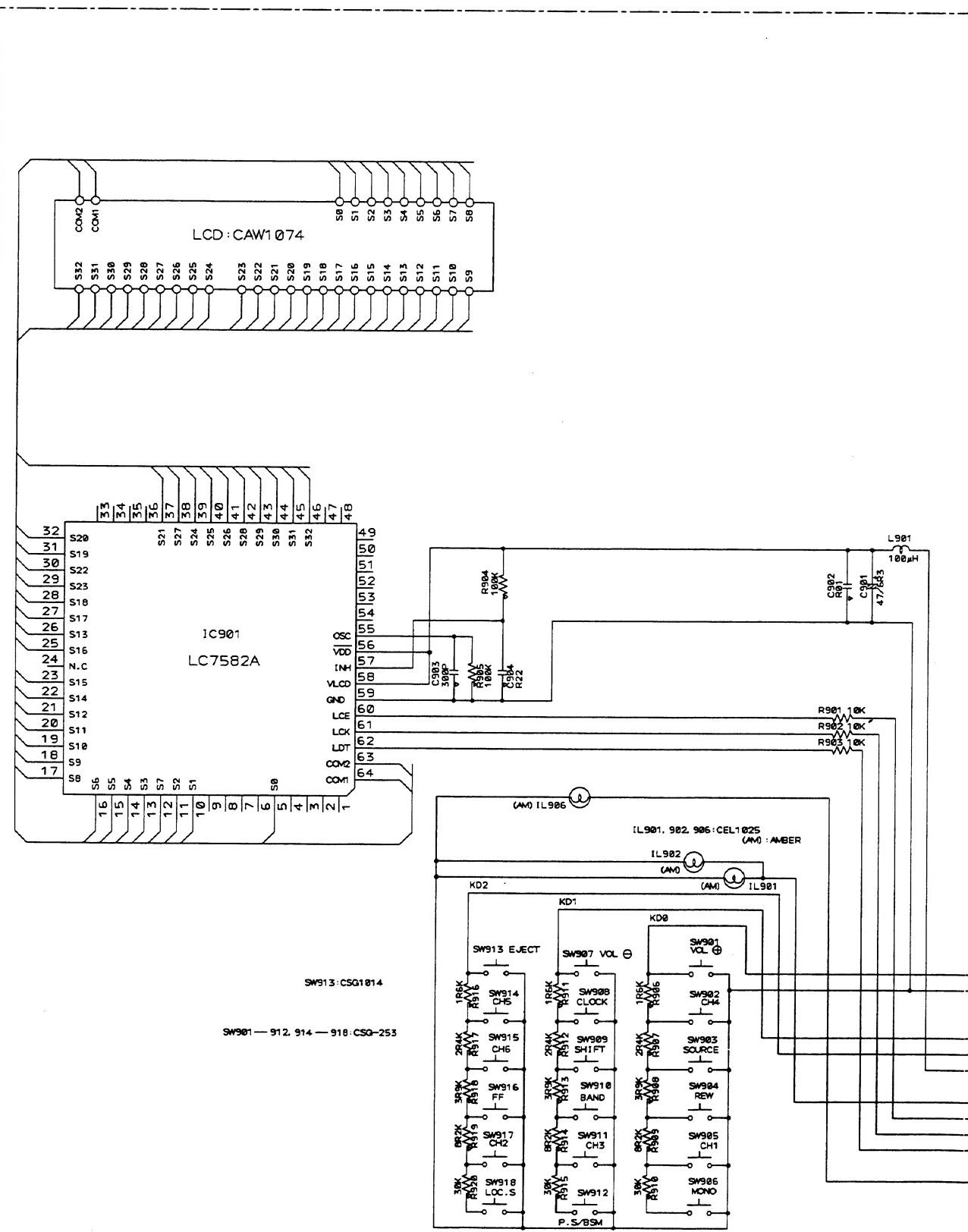


This diagram shows the circuit layout of the IC901 board. The central component is IC901, which is connected to several other parts. On the left, there's a connection to SW913 EJECT. Below IC901 is an LCD display. To the right of IC901 are various control components: SW908 CLOCK, SW915 CH6, SW914 CH5, SW916 FF, SW917 CH4, SW902 CH3, SW911 CH2, SW905 CH1, SW903 SOURCE, SW909 SHIFT, SW906 MONO, SW918 LOC. S, SW904 REW, SW910 BAND, and SW901 VOL(+). There are also several resistors labeled R901 through R917 and capacitors C901 through C906. A large switch assembly is located at the bottom right, featuring a 15x2 grid of contacts labeled 1-15 across and 1-2 down. Various interconnects are shown as lines connecting the components.

Fig. 62

● DEH-630/US, DEH-610/ES

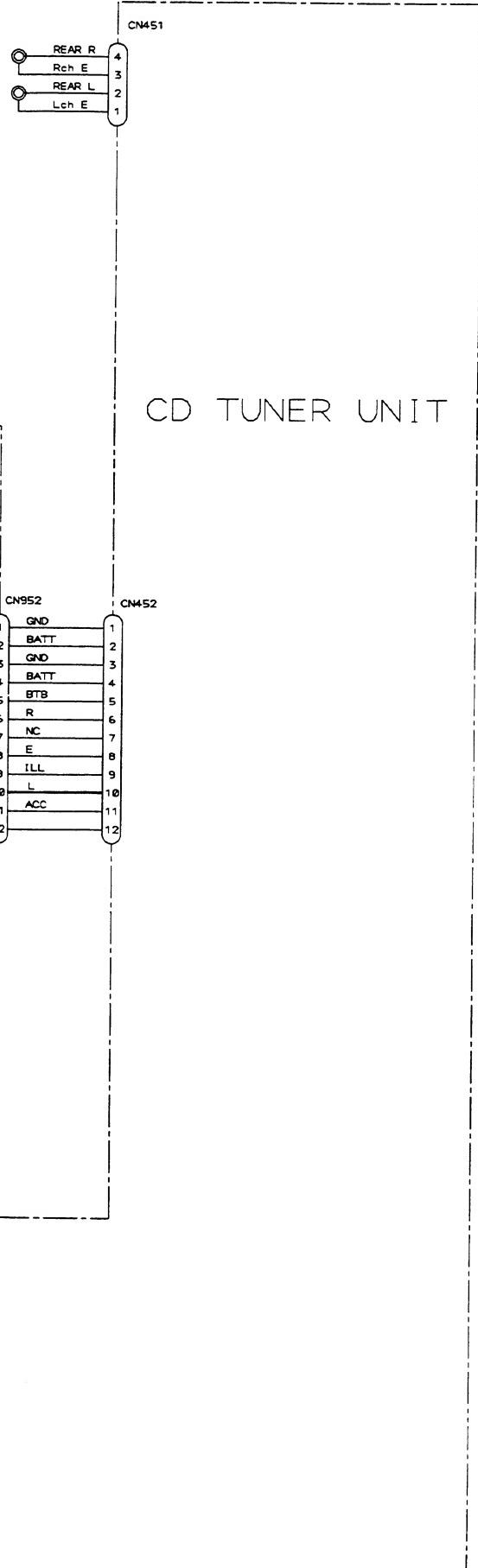
DISPLAY UNIT



NOTE :

- ▲ :Chip Resistor Decimal points for resistor
- ◀ :Chip Capacitor and capacitor fixed value
- ◀◀ :Chip Diode are expressed as :
- 2.2 → 2R2
- ◀▶ :Chip Transistor 0.022 → R022

REAR OUT



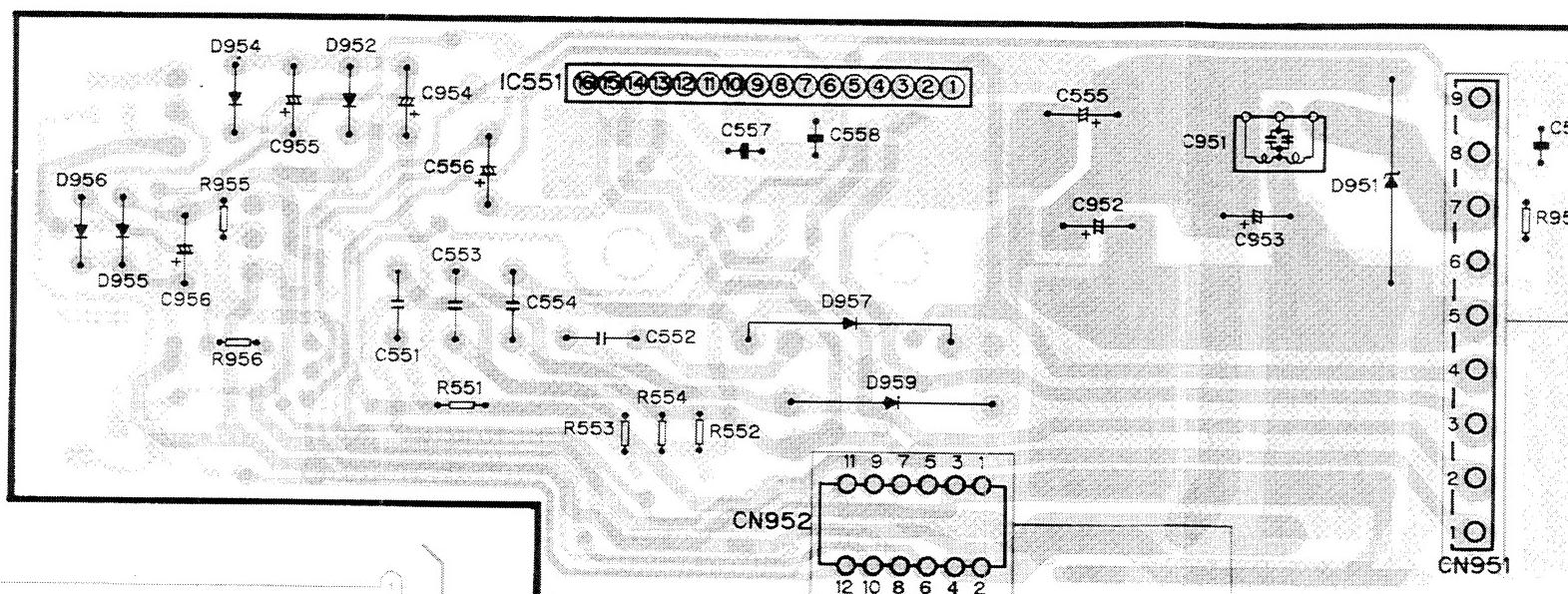
CD TUNER UNIT

AMP UNIT

AMP UNIT

IC_Q

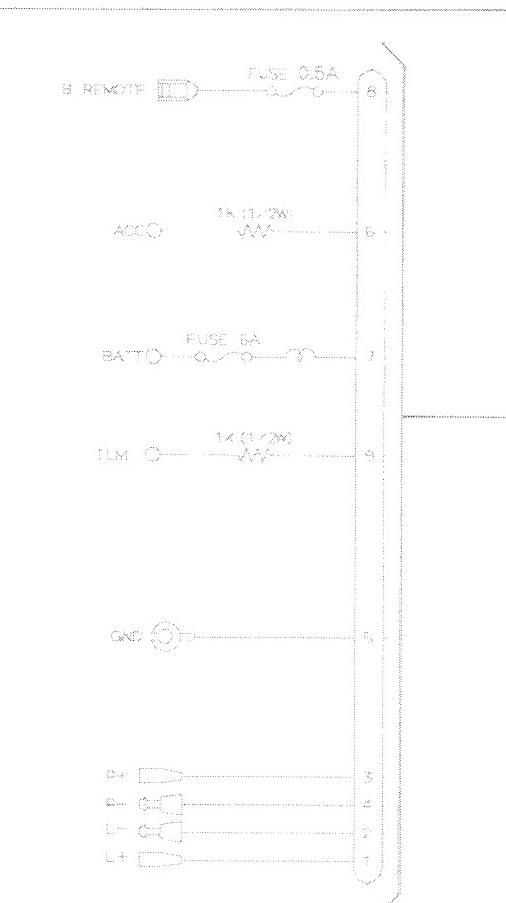
IC551



IC

IC901

DISPLAY UNIT

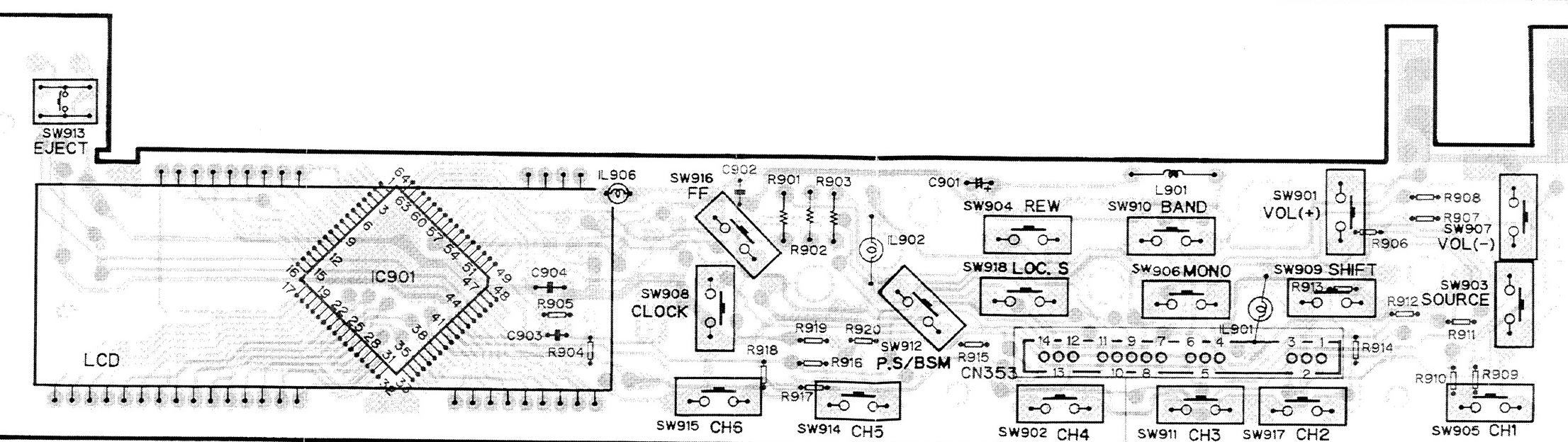


A

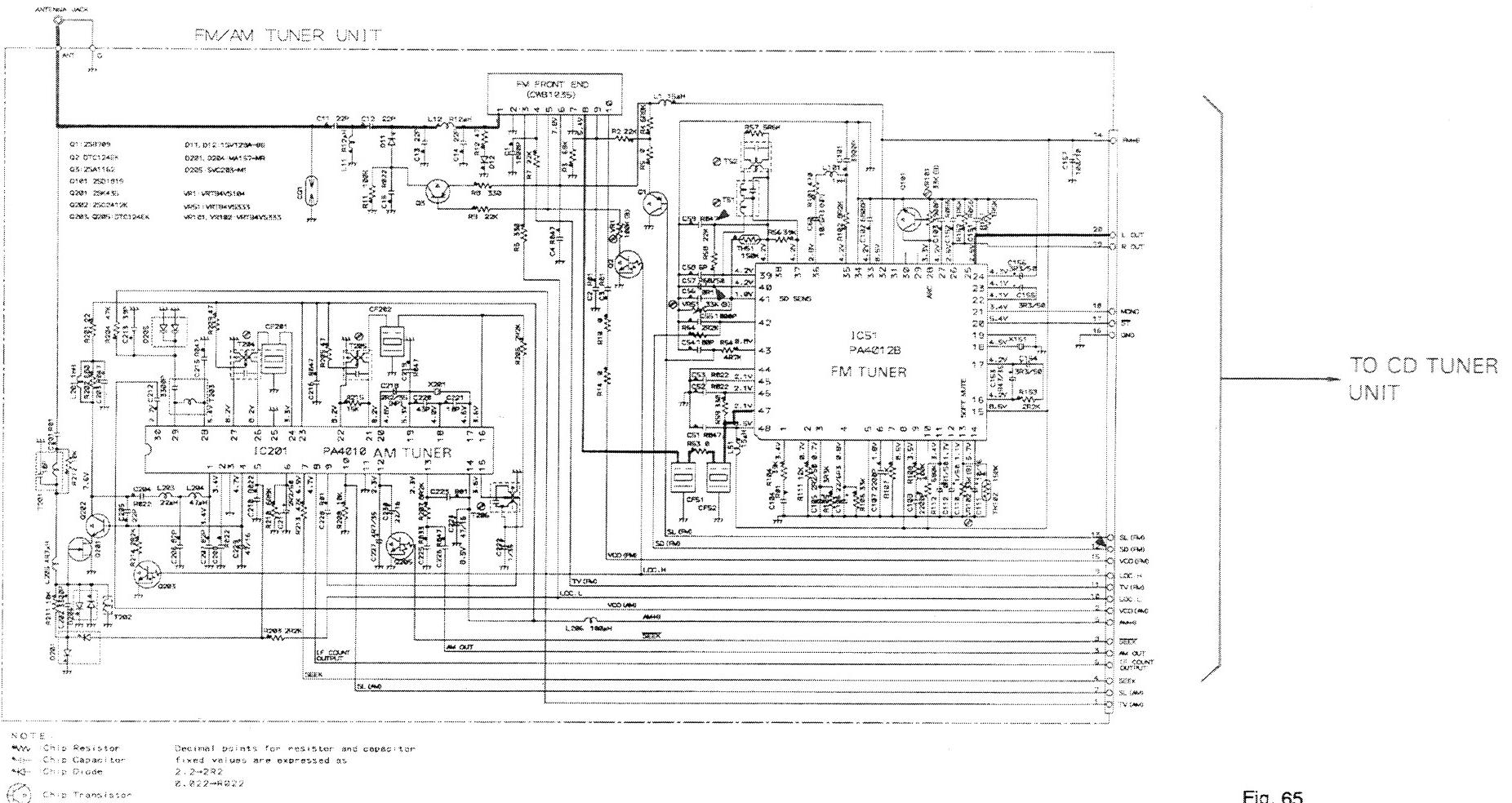
B

C

D



• FM/AM Tuner Unit (DEH-770/UC, DEH-85/US, DEH-760/UC, DEH-660/UC)



• FM/AM Tuner Unit (DEH-630/US)

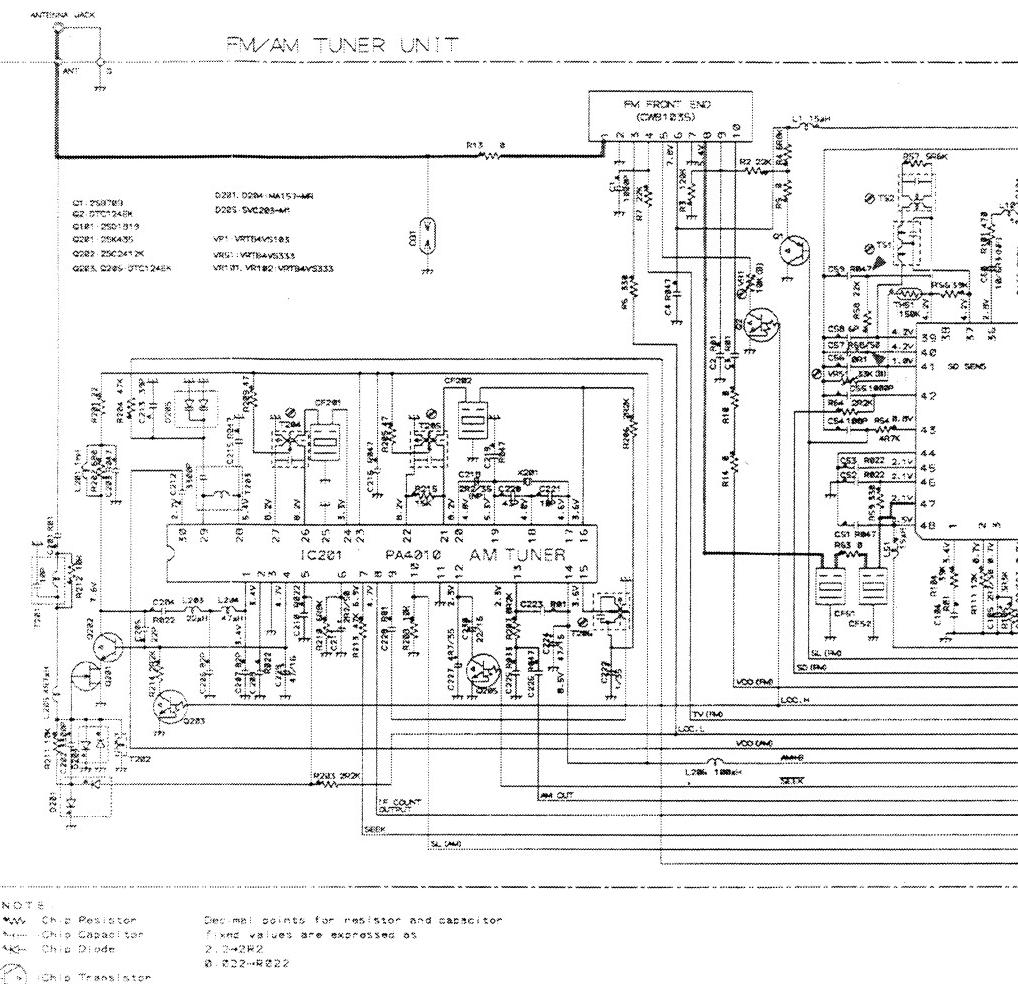
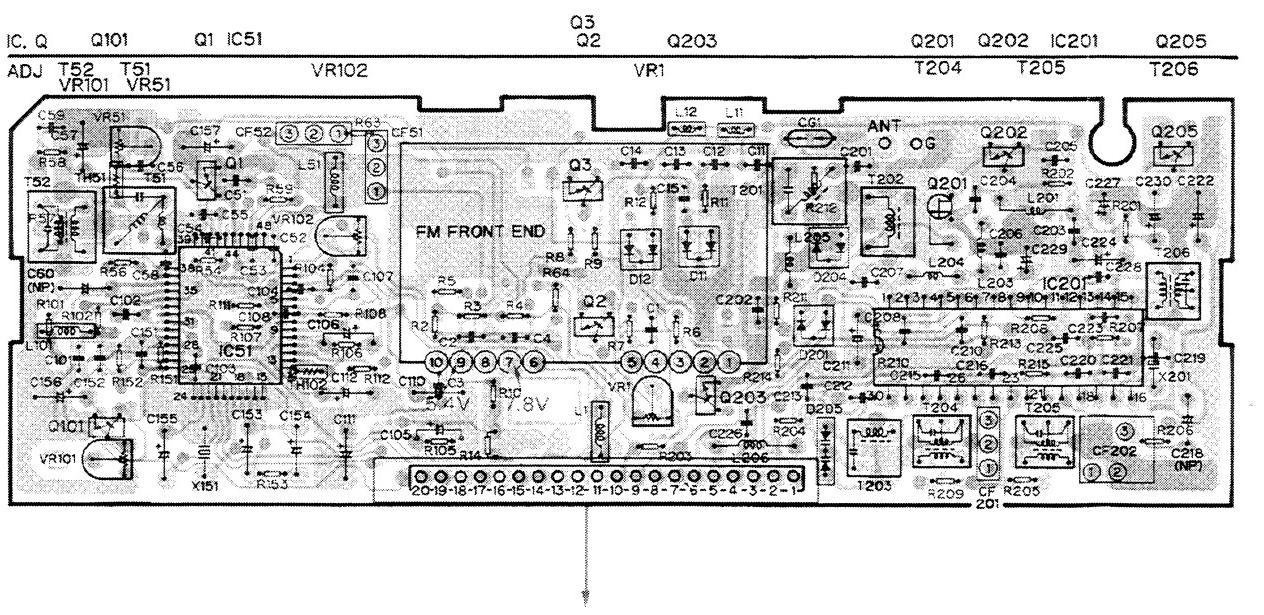


Fig. 65



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12

• FM/AM Tuner Unit (DEH-710/ES, DEH-610/ES)

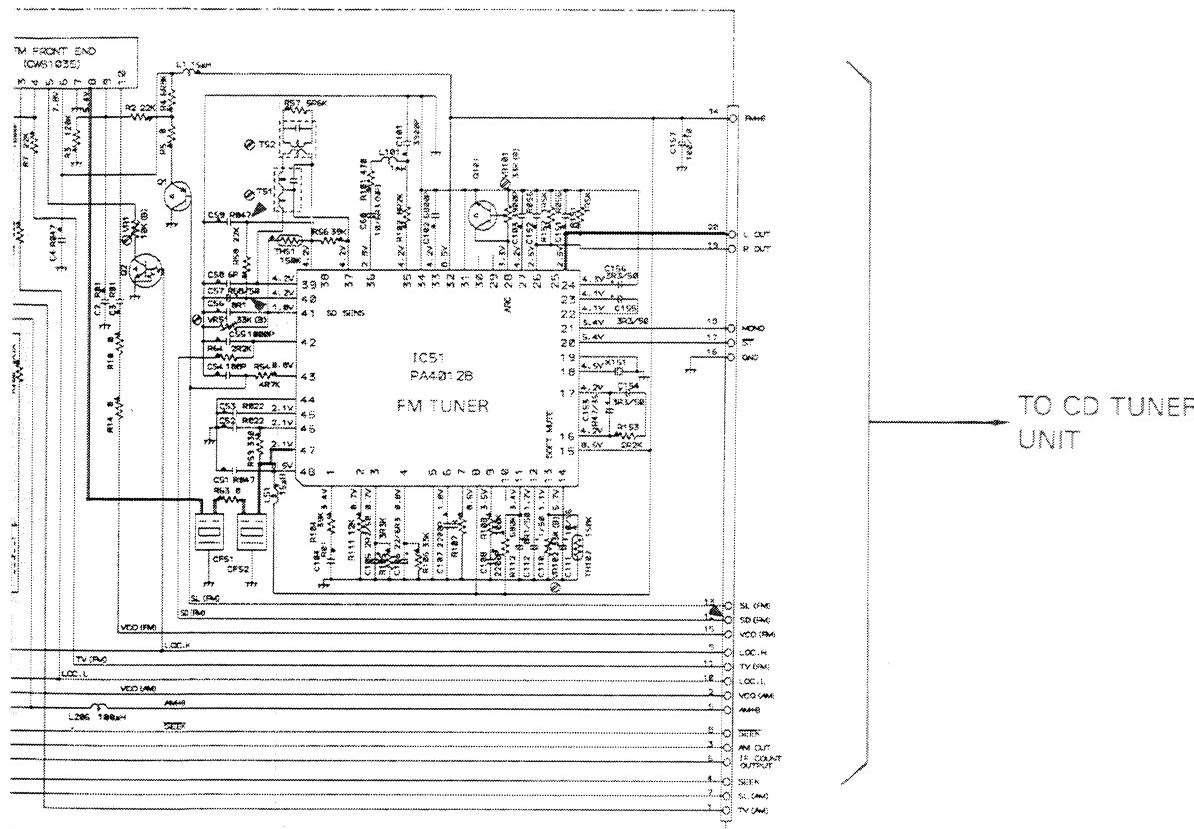


Fig. 67

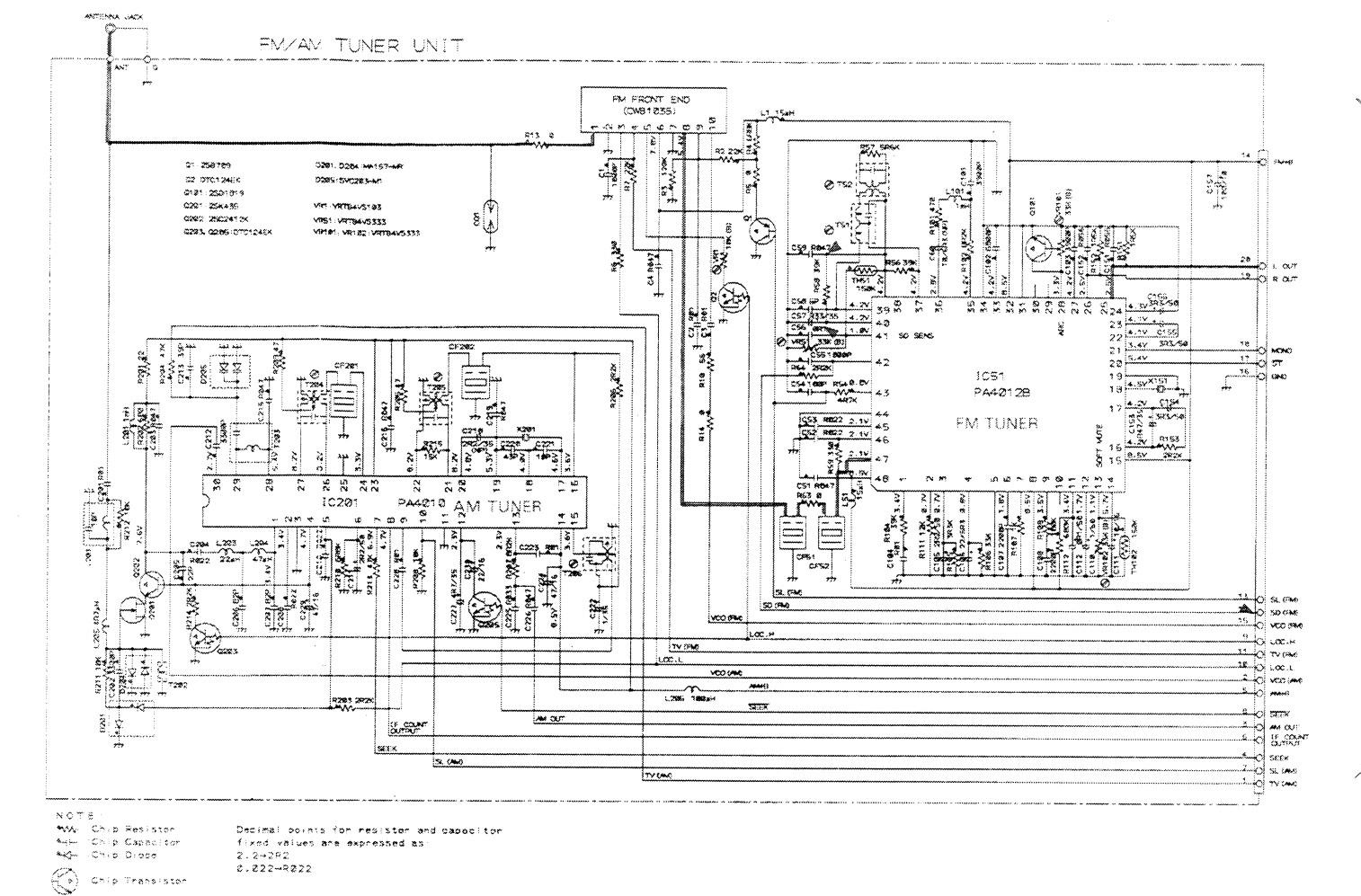


Fig. 69

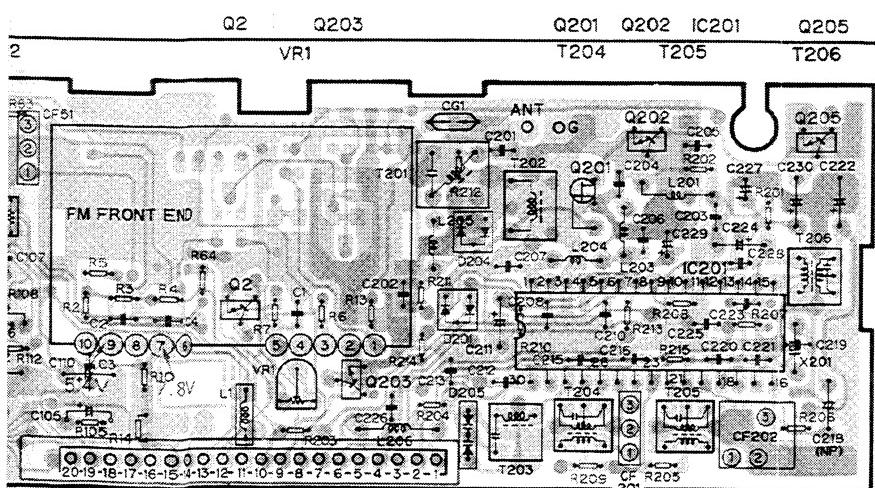


Fig. 68

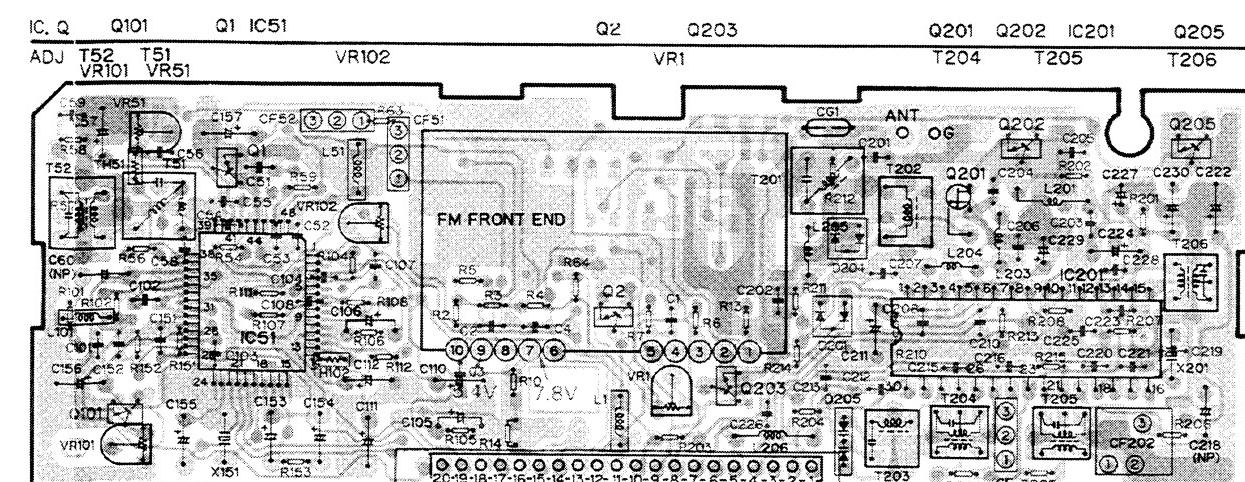


Fig. 70

7

8

9

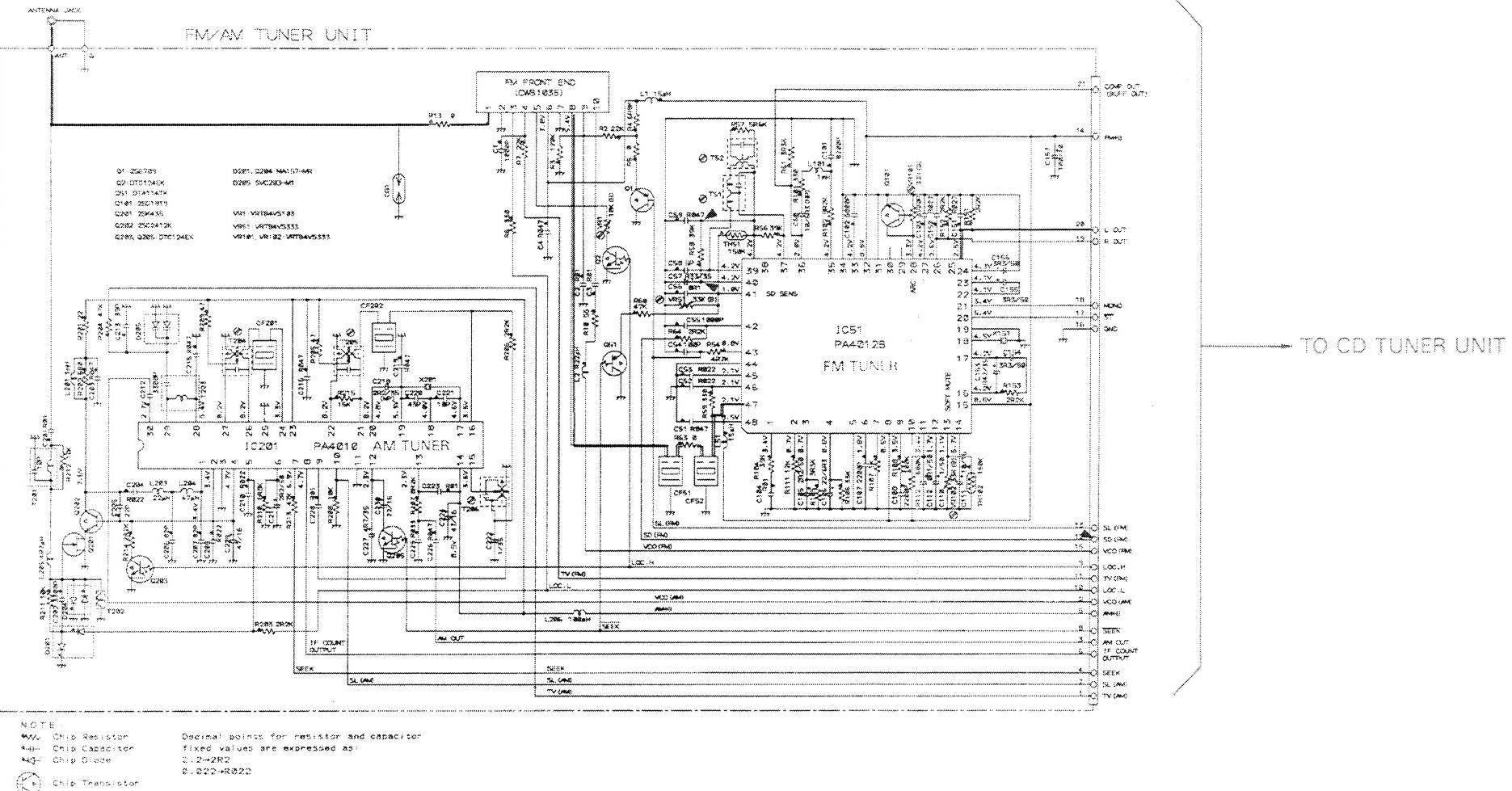
10

11

12

11

• FM/AM Tuner Unit (DEH-770SDK/WG, DEH-760SDK/WG)



• FM/AM Tuner Unit (DEH-770/EW, DEH-760/EW)

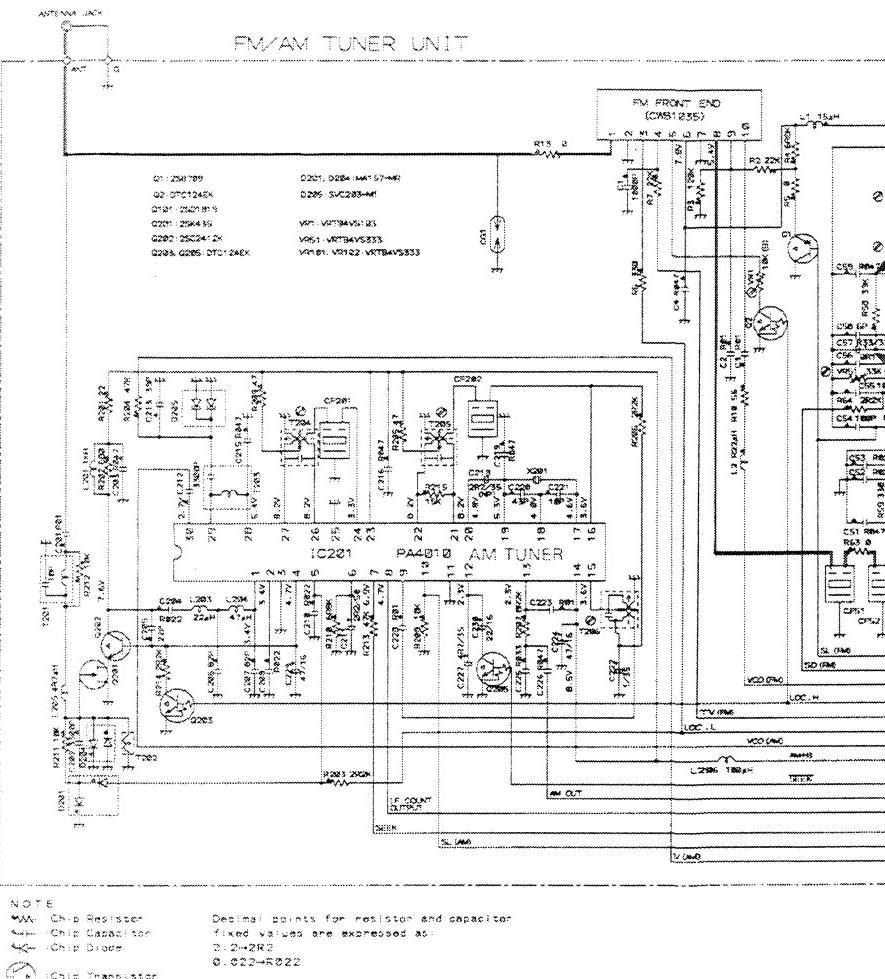


Fig. 71

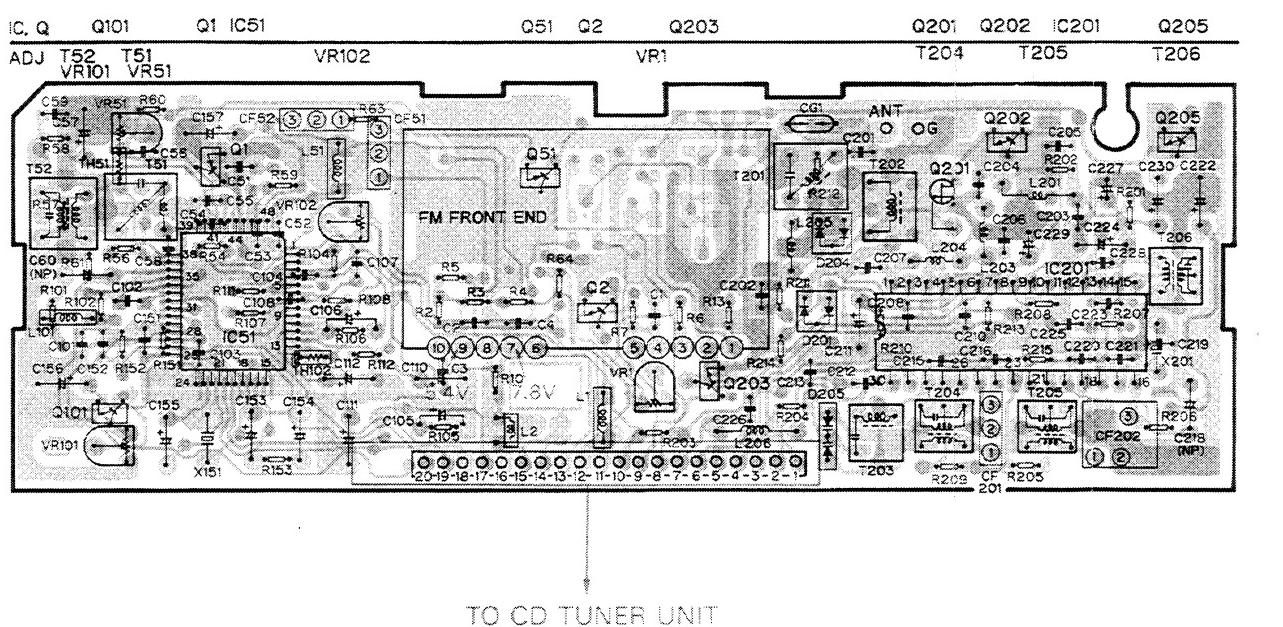
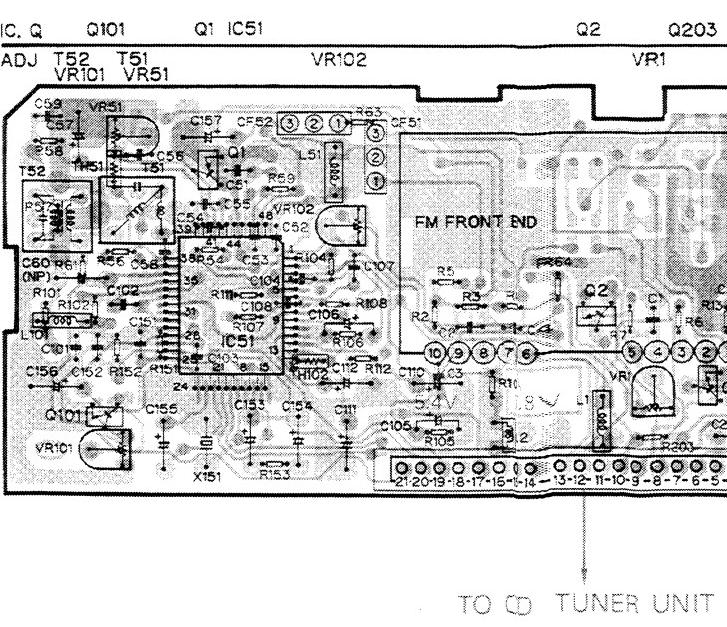


Fig. 72



TO CD TUNER UNIT

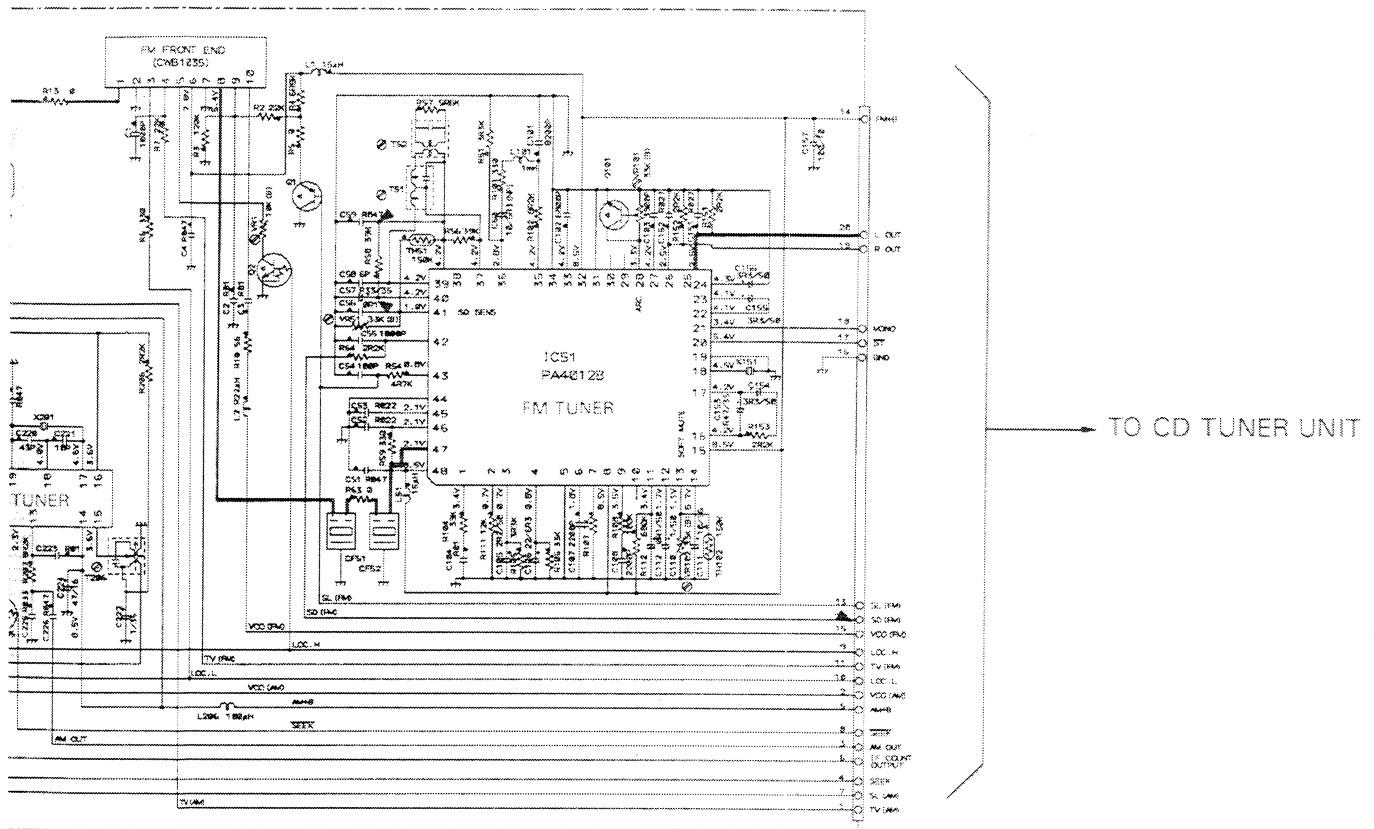


Fig. 73

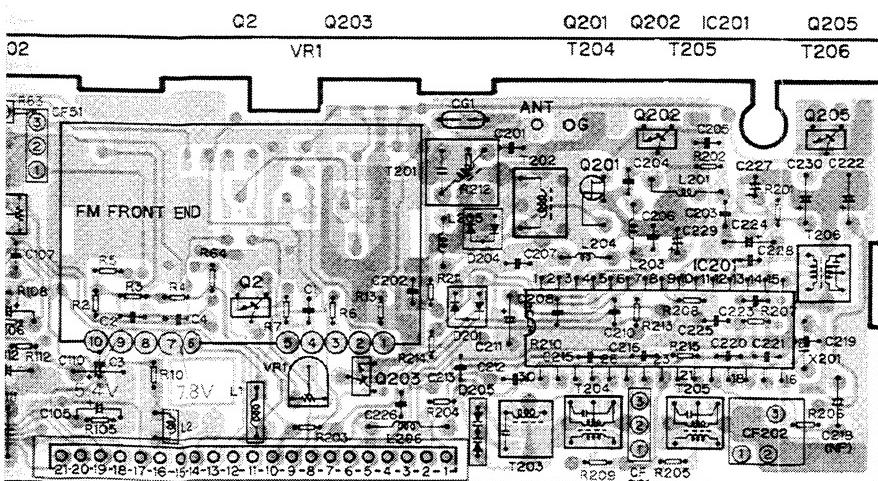


Fig. 74

19. CD MECHANISM UNIT EXPLODED VIEW

NOTE:

- The parts marked with "●" may need long time to supply and their supply is subject to refuse as the case may be.
- Because the parts with encircled number shown on the dismantling drawing are not spare parts, we are unable to supply them in principle.

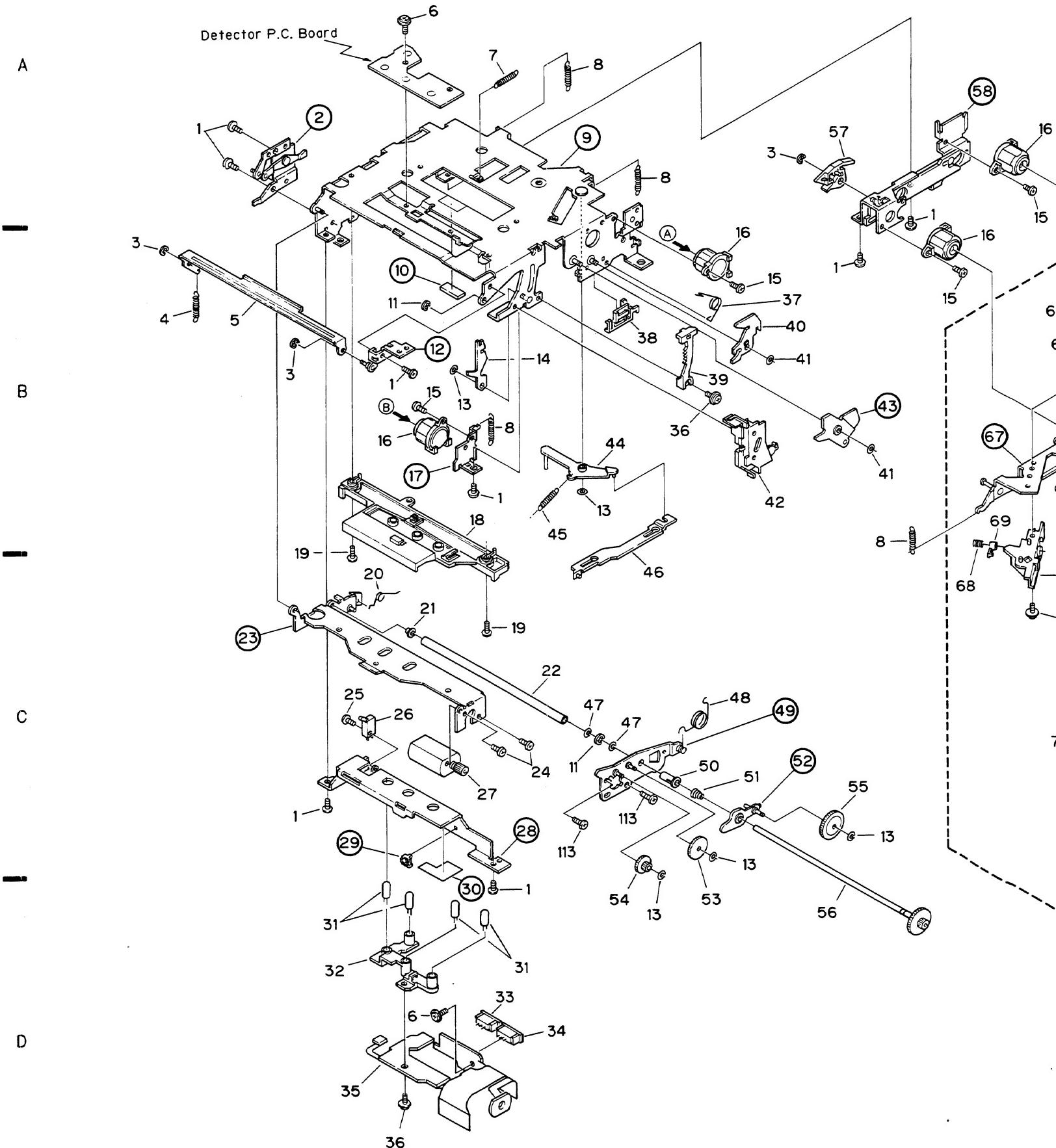
• Parts List

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	Screw	BMZ26P030FMC	36	Screw	CBA1075
2	Bracket Unit	CXA3469	37	Spring	CBH1336
3	Washer	YE15FUC	38	Holder	CNV1633
4	Spring	CBH1137	39	Gear	CNV2302
5	Arm	CNC2858	40	Arm	CNV2451
6	Screw	CBA1076	41	Washer	CBF1022
7	Spring	CBH1136	42	Cover	CNV2452
8	Spring	CBH1182	43	Arm Unit	CXA3393
9	Chassis Unit	CXA3392	44	Arm	CNV2506
10	Cushion	CNM2068	45	Spring	CBH1343
11	Washer	YE20FUC	46	Lever	CNV2505
12	Bracket Unit	CXA2986	47	Washer	HBF-126
13	Washer	CBF-166	48	Spring	CBH1133
14	Cam	CNV2535	49	Bracket Unit	CXA2982
15	Screw	CBA1118	50	Bearing	CNV2224
16	Damper Unit	CXA3339	51	Spring	CBH1181
17	Bracket	CNC1926	52	Arm Unit	CXA2994
18	Guide	CNV2221	53	Gear	CNV1628
19	Screw	CBA1131	54	Gear	CNV1627
20	Spring	CBH1299	55	Gear	CNV1529
21	Bearing	CNV1884	56	Gear Unit	CXA2990
22	Roller	CNV2225	57	Arm	CNV2510
23	Arm Unit	CXA2983	58	Bracket Unit	CXA2984
24	Screw	HBA-175	● 59	Carriage Mechanism Unit	CXA3474
25	Screw	CBA1070	26	Switch	CSN1020
			27	Motor Unit	CXA2129
			28	Bracket	CNC2859
			29	Holder	CNV2511
			30	Insulator	CNM2560
			31	LED	SLH-34VC3F
			32	Holder	CNV2226
			33	Connector	CKS-719
			34	Connector	CKS-721
			35	P. C. Board	CNP2178
			65	Arm Unit	CXA3441
			66	Chassis Unit	CXA2991
			67	Bracket Unit	CXA2992
			68	Spring	CBH1104
			69	Spacer	CNV1844

TO CD TUNER UNIT

Mark No.	Description	Part No.	Mark No.	Description	Part No.
70	Holder	CNV2485	95	Screw Unit	CXA2375
71	Holder Unit	CXA2993	96	Holder	CNV1781
72	Holder	CNV2229	97	Short Pin	CBL1010
73	Switch	CSN1018	98	Spring	CBH1292
74	Screw	CBA1070	99	Spring	CBH1297
75	Motor Unit	CXM1054	100	Spring	CBH1296
76	P.C. Board	CNP2383	101	Spring	CBH1294
77	Cushion	CNV1863	102	Arm Unit	CXA3470
78	Shaft	CLA1197	103	Spacer	CNM1787
79	Shaft	CLA1196	104	Ball	CNR1079
80	Holder	CNV1512	105	Clamper	CNV2411
81	Screw	CBA1062	106	Arm Unit	CXA3471
82	Spring	CBH1105	107	Spring	CBH1295
83	Holder	CNC1736	108	Arm	CNV2228
84	Screw	CLA1319	109	Arm Unit	CXA3472
85	PU Unit	CGY1015	110	Spring	CBH1293
86	Holder Unit	CXA1860	111	Guide	CNV2223
87	Spring	CBH1106	112	Screw	CBA1084
88	Rack	CNV1513	113	Screw	BMZ20P030FMC
89	Connector	CDE2849			
90	P.C. Board	CNP2384			
91	Motor Unit	CXA3347			
92	Bracket	CNC3288			
93	Screw	CBA-098			
94	Belt	CNT1020			

● CD Mechanism Unit



● CD Mechanism Unit

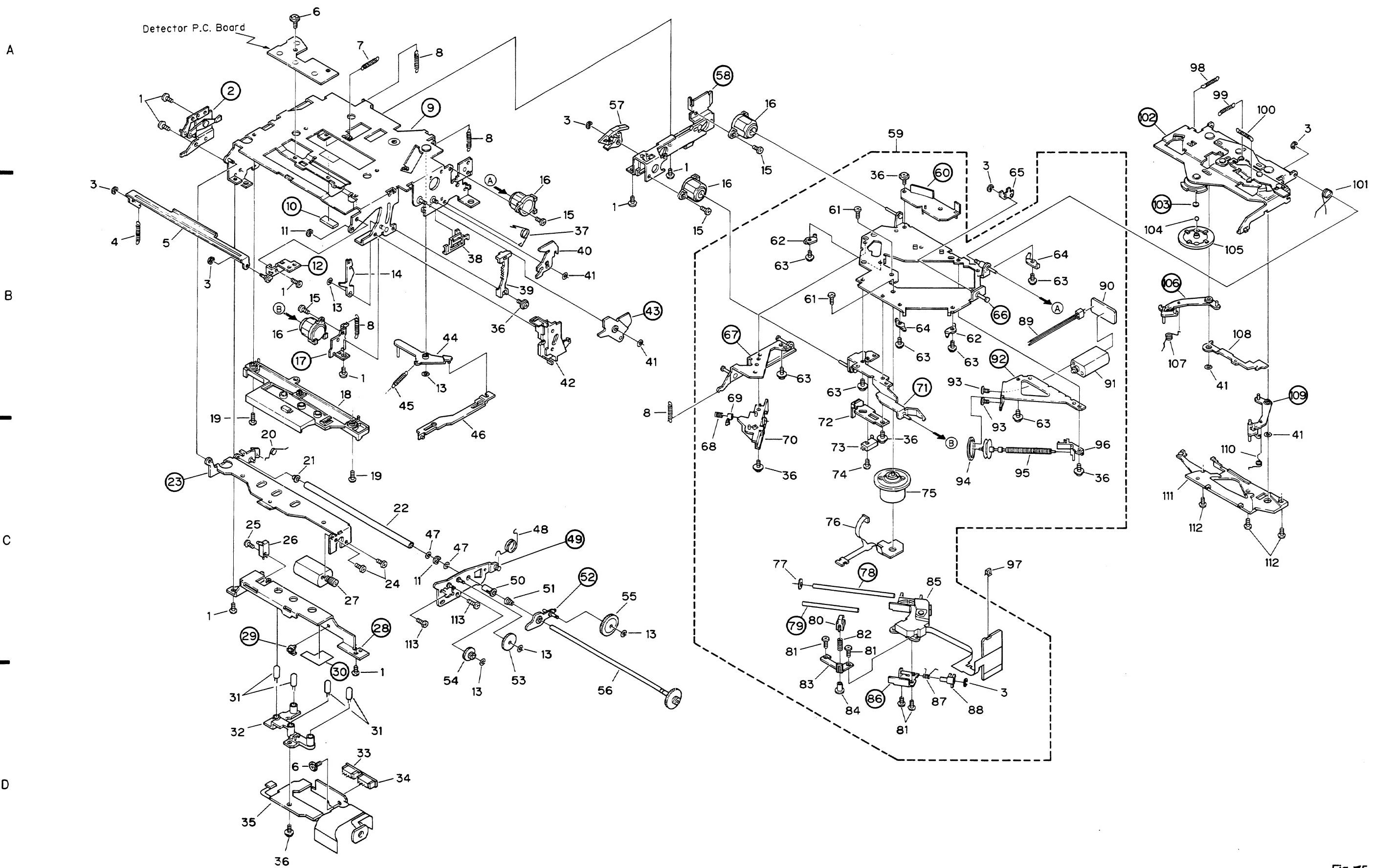


Fig.75

20. EXPLODED VIEW

● Parts List

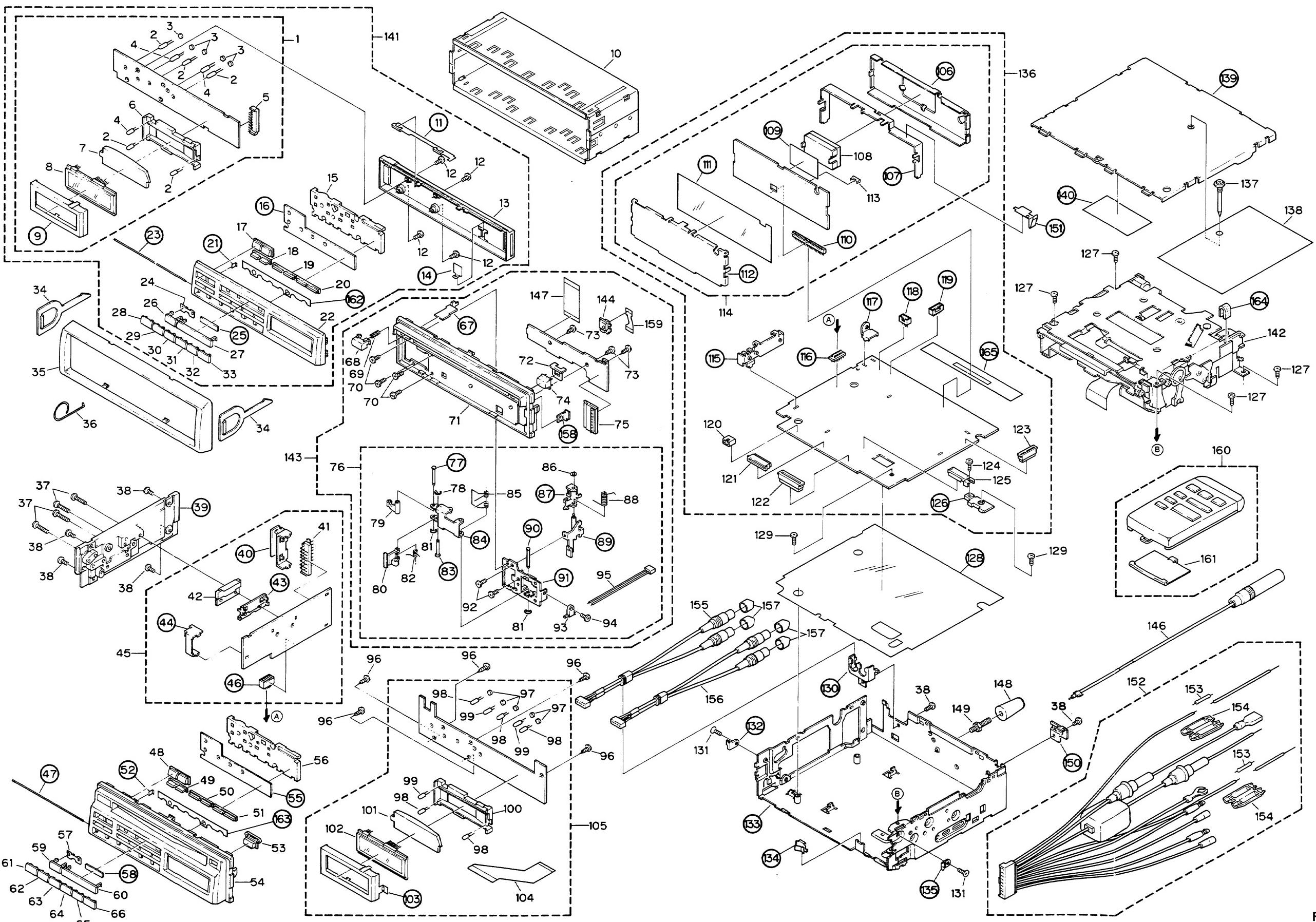


Fig. 76

● Parts List (DEH-770/UC)

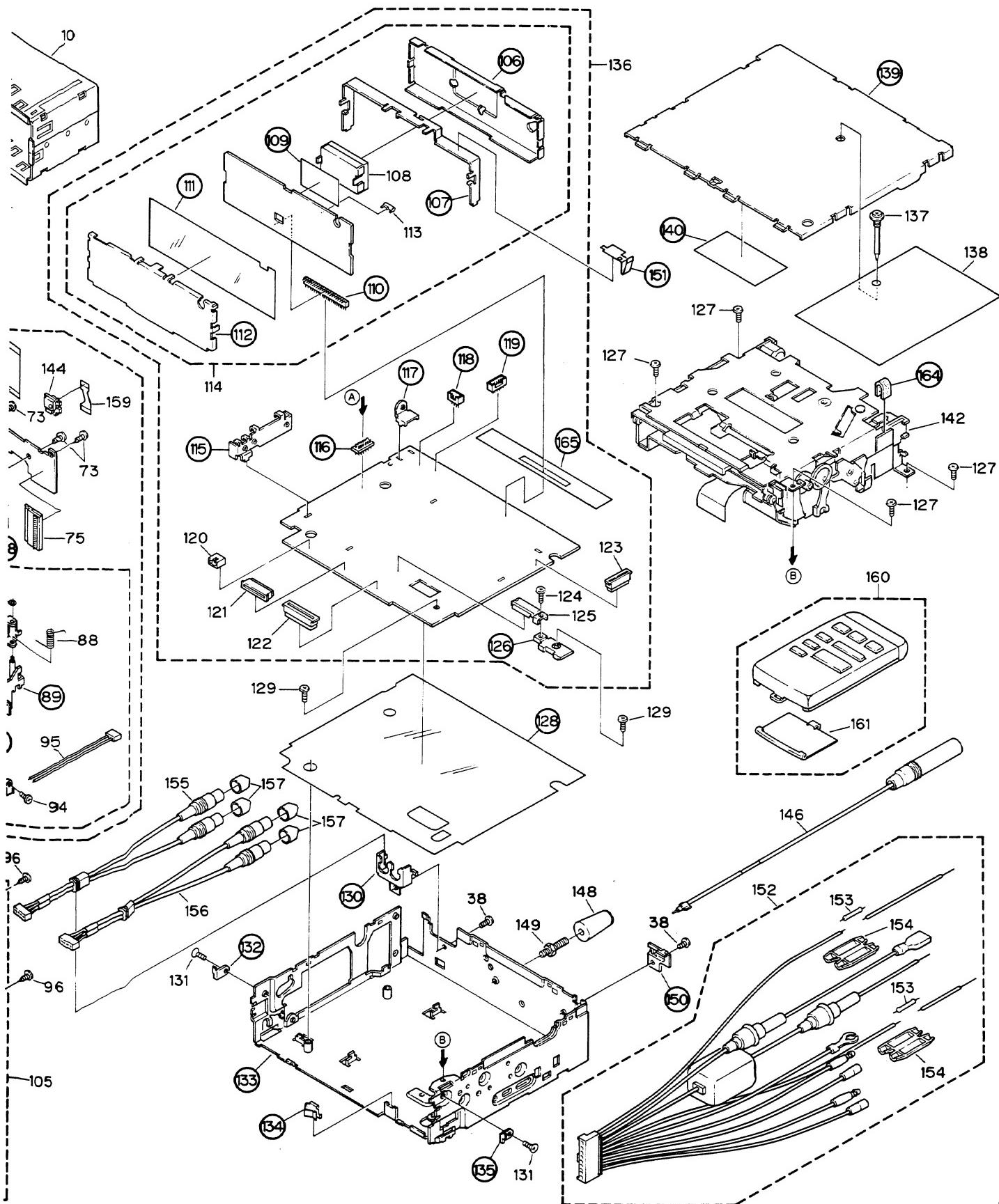


Fig. 76

A	Mark No.	Description	Part No.	Mark No.	Description	Part No.
①	1	Display Unit	CWX1351	41	Plug	CKS-466
	2	Lamp	CEL-147	42	IC	AN7188K
	3	Bush	CNW-766	43	Holder	CNC2969
	4	Lamp	CEL1025	44	Holder	CNC2970
	5	Plug	CKS1663	④	45 Amp Unit	CWH1106
	6	Holder	CNV2307	46	Connector	CKS-747
	7	Lens	CNV2305	47 - 66	.....	CNC2976
	8	LCD	CAW1074	67	Holder	CAC2242
	9	Case	CNC3389	68	Button	CBH1314
	10	Holder	CNC1484	69	Spring	
B	11	Plate	CNC3198	70	Screw	PMS20P030FZK
	12	Screw	BMZ20P050FZK	71	Grille Unit	CXA3748
	13	Grille	CNS1849	72	Holder	CNV2614
	14	Holder	CNC3199	73	Screw	BPZ20P040FMC
	15	Lens	CNV2304	74	Lens	CNS2072
	16	Cushion	CNM2656	75	Socket	CKS1664
	17	Button	CAC2243	④	76 Detach Unit	CXA3446
	18	Button	CAC2241	77	Shaft	CLA1802
	19	Button	CAC2350	78	Washer	YE12FUC
	20	Button	CAC2351	79	Arm	CNV2483
C	21	Stopper	CNC3208	80	Holder	CNV2306
	22	Grille Unit	CXA3944	81	Washer	YE15FUC
	23	Shaft	CLA1807	82	Spring	CBH1364
	24	Cushion	CNM2978	83	Shaft	CLA1709
	25	Cushion	CNM2655	84	Holder Unit	CXA3292
	26	Button	CAC2240	85	Spring	CBH1315
	27	Button	CAC2239	86	Washer	WT22D050D025
	28	Button	CAC2344	87	Holder Unit	CXA3291
	29	Button	CAC2345	88	Spring	CBH1328
	30	Button	CAC2346	89	Arm	CNC2972
	31	Button	CAC2347	90	Shaft	CLA1711
	32	Button	CAC2348	91	Holder Unit	CXA3293
	33	Button	CAC2349	92	Screw	BMZ20P040FMC
	34	Handle	CNC1631	93	Switch	CSN1012
	35	Panel	CNS1911	94	Screw	BMZ20P060FMC
D	36	Spring	CBH-865	95	Cord	CDE2626
	37	Screw	BMZ30P140FMC	96 - 105	.....
	38	Screw	BMZ30P050FMC	106	.....
	39	Heat Sink	CNR1153	107	Holder	CNC2880
	40	Holder	CNC2974	108	FM Front End	CWB1035

Mark No.	Description	Part No.	Mark No.	Description	Part No.
109	Insulator	CNM2105	139	Case	CNB1305
110	Plug (20P)	CKS1628	140	Insulator	CNM2336
111	.....		141	Display Assy	CXA3962
112	.....		④ 142	CD Mechanism Unit	CXK2410
113	Antenna Jack	CKX1010	143	Detach Grille Assy	CXA3980
④ 114	FM/AM Tuner Unit	CWE1169	144	Composite Part	CWW1327
115	Holder	CNC2968	145	.....	.
116	Plug	CKS-728	146	Antenna Cable	CDH1104
117	Holder	CNC3203	147	P.C. Board	CNP2518
118	Plug	CKS-785	148	Bush	CNV1917
119	Connector	CKS2032	149	Screw	CBA1002
120	Plug	CKS-696	150	Holder	CNC2742
121	Connector	CKS1535	151	Plate	CNC3382
122	Connector	CKS1572	152	Cord Assy	CDE3283
123	Connector	CKS1565	153	Resistor	RS1/2PS102JL
124	Screw	HBA-165	154	Cap	CNS1472
125	IC	AN8377N	155	Cord	CDE3056
126	Plate	CNC3204	156	Cord	CDE3219
127	Screw	BMZ26P040FMC	157	Cap	CNW-829
128	Insulator	CNM2494	158	Holder	CNC3351
129	Screw	PMS26P040FMC	159	P.C. Board	CNP2519
130	Holder	CNC3082	160	Remote Control Assy	CXA4015
131	Screw	CMZ26P040FMC	161	Battery Cover	CNS2197
132	Holder	CNC3331	162	Spacer	CNM2802
133	Chassis Unit	CXA3289	163	.....	.
134	Plate	CNC3649	164	Cushion	CNM1999
135	Holder	CNC3332	165	.....	.
④ 136	CD Tuner Unit	CWX1341			
137	Screw	CBA1094			
138	Caution Card	CRP1031			

Mark No.	Description	DEH-770/UC	DEH-85/US	DEH-760/UC	DEH-710/ES
		Part No.	Part No.	Part No.	Part No.
22	Grille Unit	CXA3944	CXA3951	CXA3948	CXA3947
④ 114	FM/AM Tuner Unit	CWE1169	CWE1169	CWE1169	CWE1168
④ 136	CD Tuner Unit	CWX1341	CWX1341	CWX1341	CWX1344
141	Display Assy	CXA3962	CXA3966	CXA3964	CXA3972
143	Detach Grille Assy	CXA3980	CXA3980	CXA3981	CXA3980
144	Composite Part	CWW1327	CWW1327	.....	CWW1327
155	Cord	CDE3056	CDE3054	CDE3056	CDE3054
156	Cord	CDE3219	CDE3055	CDE3219	CDE3055
159	P.C. Board	CNP2519	CNP2519	CNP2618	CNP2519
160	Remote Control Assy	CXA4015	CXA4017	.....	CXA4016
161	Battery Cover	CNS2197	CNS2197	.....	CNS2197

● Parts List (DEH-770SDK/WG)

Mark No.	Description	Part No.	Mark No.	Description	Part No.
① 1	Display Unit	CWX1352	41	Plug	CKS-466
2	Lamp	CEL-147	42	IC	AN7188K
3	Bush	CNW-766	43	Holder	CNC2969
4	Lamp	CEL1013	44	Holder	CNC2970
5	Plug	CKS1663	② 45	Amp Unit	CWH1106
6	Holder	CNV2307	46	Connector	CKS-747
7	Lens	CNV2305	47-66	.....
8	LCD	CAW1074	67	Holder	CNC2976
9	Case	CNC3389	68	Button	CAC2242
10	Holder	CNC1484	69	Spring	CBH1314
11	Plate	CNC3198	70	Screw	PMS20P030FZK
12	Screw	BMZ20P050FZK	71	Grille Unit	CXA3748
13	Grille	CNS1849	72	Holder	CNV2614
14	Holder	CNC3199	73	Screw	BPZ20P040FMC
15	Lens	CNV2304	74	Lens	CNS2072
16	Cushion	CNM2656	75	Socket	CKS1664
17	Button	CAC2243	③ 76	Detach Unit	CXA3446
18	Button	CAC2241	77	Shaft	CLA1802
19	Button	CAC2350	78	Washer	YE12FUC
20	Button	CAC2351	79	Arm	CNV2483
21	Stopper	CNC3208	80	Holder	CNV2306
22	Grille Unit	CXA3946	81	Washer	YE15FUC
23	Shaft	CLA1807	82	Spring	CBH1364
24	Cushion	CNM2978	83	Shaft	CLA1709
25	Cushion	CNM2655	84	Holder Unit	CXA3292
26	Button	CAC2240	85	Spring	CBH1315
27	Button	CAC2239	86	Washer	WT22D050D025
28	Button	CAC2344	87	Holder Unit	CXA3291
29	Button	CAC2345	88	Spring	CBH1328
30	Button	CAC2346	89	Arm	CNC2972
31	Button	CAC2347	90	Shaft	CLA1711
32	Button	CAC2348	91	Holder Unit	CXA3293
33	Button	CAC2349	92	Screw	BMZ20P040FMC
34	Handle	CNC1631	93	Switch	CSN1012
35	Panel	CNS1911	94	Screw	BMZ20P060FMC
36	Spring	CBH-865	95	Cord	CDE2626
37	Screw	BMZ30P140FMC	96-105	.....
38	Screw	BMZ30P050FMC	106	Case	CNB1279
39	Heat Sink	CNR1153	107	Holder	CNC2880
40	Holder	CNC2974	108	FM Front End	CWB1035

Mark No.	Description	Part No.	Mark No.	Description	Part No.
109	Insulator	CNM2105	139	Case	CNB1305
110	Plug(21P)	CKS1735	140	Insulator	CNM2336
111	Insulator	CNM2391	141	Display Assy	CXA3970
112	Case	CNB1280	① 142	CD Mechanism Unit	CXK2410
113	Antenna Jack	CKX1010	143	Detach Grille Assy	CXA3980
② 114	FM/AM Tuner Unit	CWE1187	144	Composite Part	CWW1327
115	Holder	CNC2968	145	.....
116	Plug	CKS-728	146	Antenna Cable	CDH1104
117	Holder	CNC3203	147	P.C. Board	CNP2518
118	Plug	CKS-785	148	Bush	CNV1917
119	Connector	CKS2032	149	Screw	CBA1002
120	Plug	CKS-696	150	Holder	CNC2742
121	Connector	CKS1535	151	Plate	CNC3382
122	Connector	CKS1572	152	Cord Assy	CDE3285
123	Connector	CKS1565	153	Resistor	RS1/2PS102JL
124	Screw	HBA-165	154	Cap	CNS1472
125	IC	AN8377N	155	Cord	CDE3054
126	Plate	CNC3204	156	Cord	CDE3055
127	Screw	BMZ26P040FMC	157	Cap	CNW-829
128	Insulator	CNM2494	158	Holder	CNC3351
129	Screw	PMS26P040FMC	159	P.C. Board	CNP2519
130	Holder	CNC3082	160	Remote Control Assy	CXA4016
131	Screw	CMZ26P040FMC	161	Battery Cover	CNS2197
132	Holder	CNC3331	162	Spacer	CNM2802
133	Chassis Unit	CXA4019	163	.....
134	Plate	CNC3649	164	Cushion	CNM1999
135	Holder	CNC3332	165	Insulator	CNM2996
② 136	CD Tuner Unit	CWX1343			
137	Screw	CBA1094			
138	Caution Card	CRP1031			

Mark No. Description	DEH-770SDK/WG	DEH-770/EW	DEH-760SDK/WG	DEH-760/EW
	Part No.	Part No.	Part No.	Part No.
22 Grille Unit	CXA3946	CXA3945	CXA3950	CXA3949
106 Case	CNB1279	.....	CNB1279	.....
110 Plug	CKS1735 (21P)	CKS1628 (20P)	CKS1735 (21P)	CKS1628 (20P)
111 Insulator	CNM2391	.....	CNM2391	.....
112 Case	CNB1280	.....	CNB1280	.....
④ 114 FM/AM Tuner Unit	CWE1187	CWE1187	CWE1187	CWE1187
119 Connector	CKS2032	CKS2032	.....	.....
130 Holder	CNC3082	CNC3082	CNC3081	CNC3081
133 Chassis Unit	CXA4019	CXA3289	CXA4020	CXA3289
④ 136 CD Tuner Unit	CWX1343	CWX1342	CWX1349	CWX1348
141 Display Assy	CXA3970	CXA3968	CXA3979	CXA3977
143 Detach Grille Assy	CXA3980	CXA3980	CXA3981	CXA3981
144 Composite Part	CWW1327	CWW1327	.....	.....
152 Cord Assy	CDE3285	CDE3284	CDE3285	CDE3284
155 Cord	CDE3054	CDE3054	CDE3056	CDE3056
156 Cord	CDE3055	CDE3055	.....	.....
157 Cap	CNW-829 (× 4)	CNW-829 (× 4)	CNW-829 (× 2)	CNW-829 (× 2)
159 P.C. Board	CNP2519	CNP2519	CNP2618	CNP2618
160 Remote Control Assy	CXA4016	CXA4016	.....	.....
161 Battery Cover	CNS2197	CNS2197	.....	.....
165 Insulator	CNM2996	.....	CNM2996	.....

● Parts List (DEH-660/UC)

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1—9			99 Lamp		CEL1025
10 Holder		CNC1484	100 Holder		CNV2307
11—33			101 Lens		CNV2305
34 Handle		CNC1631	102 LCD		CAW1074
35 Panel		CNS1911	103 Case		CNC3390
36 Spring		CBH-865	104 P.C. Board		CNP2255
37 Screw		BMZ30P140FMC	④ 105 Display Unit		CWX1353
38 Screw		BMZ30P050FMC	106		
39 Heat Sink		CNR1153	107 Holder		CNC2880
40 Holder		CNC2974	108 FM Front End		CWB1035
41 Plug		CKS-466	109 Insulator		CNM2105
42 IC		AN7188K	110 Plug (20P)		CKS1628
43 Holder		CNC2969	111		
44 Holder		CNC2970	112		
④ 45 Amp Unit		CWH1106	113 Antenna Jack		CKX1010
46 Connector		CKS-747	④ 114 FM/AM Tuner Unit		CWE1169
47 Shaft		CLA1807	115 Holder		CNC2968
48 Button		CAC2243	116 Plug		CKS-728
49 Button		CAC2241	117 Holder		CNC3203
50 Button		CAC2350	118 Plug		CKS-785
51 Button		CAC2351	119 Connector		CKS2032
52 Stopper		CNC3208	120		
53 Button		CAC2877	121 Connector		CKS1535
54 Grille Unit		CXA3952	122 Connector		CKS1572
55 Cushion		CNM2656	123 Connector		CKS1565
56 Lens		CNV2304	124 Screw		HBA-165
57 Cushion		CNM2978	125 IC		AN8377N
58 Cushion		CNM2655	126 Plate		CNC3204
59 Button		CAC2240	127 Screw		BMZ26P040FMC
60 Button		CAC2239	128 Insulator		CNM2494
61 Button		CAC2344	129 Screw		PMS26P040FMC
62 Button		CAC2345	130 Holder		CNC3082
63 Button		CAC2346	131 Screw		CMZ26P040FMC
64 Button		CAC2347	132 Holder		CNC3331
65 Button		CAC2348	133 Chassis Unit		CXA3289
66 Button		CAC2349	134		
67—95			135 Holder		CNC3332
96 Screw		BLZ20P050FMC	④ 136 CD Tuner Unit		CWX1345
97 Bush		CNW-766	137 Screw		CBA1094
98 Lamp		CEL-147	138 Caution Card		CRP1031

Mark No.	Description	Part No.	Mark No.	Description	Part No.
139	Case	CNB1305	151	Plate	CNC3382
140	Insulator	CNM2336	152	Cord Assy	CDE3283
141	....		153	Resistor	RS1/2PS102JL
② 142	CD Mechanism Unit	CXK2410	154	Cap	CNS1472
143—145	....		155	Cord	CDE3056
146	Antenna Cable	CDH1104	156	Cord	CDE3219
147	....		157	Cap	CNW-829
148	Bush	CNV1917	158—162	....
149	Screw	CBA1002	163	Spacer	CNM2802
150	Holder	CNC2742	164	Cushion	CNM1999
			165	....

Mark No.	Description	DEH-660/UC	DEH-630/US	DEH-610/ES
		Part No.	Part No.	Part No.
54	Grille Unit	CXA3952	CXA3953	CXA3954
97	Bush	CNW-766 (× 5)	CNW-766 (× 2)	CNW-766 (× 2)
98	Lamp	CEL-147	.....	.....
② 105	Display Unit	CWX1353	CWX1354	CWX1354
② 114	FM/AM Tuner Unit	CWE1169	CWE1186	CWE1168
119	Connector	CKS2032	.....	.....
130	Holder	CNC3082	CNC3081	CNC3081
② 136	CD Tuner Unit	CWX1345	CWX1346	CWX1347
156	Cord	CDE3219	.....	.....
157	Cap	CNW-829 (× 4)	CNW-829 (× 2)	CNW-829 (× 2)

21. PACKING METHOD

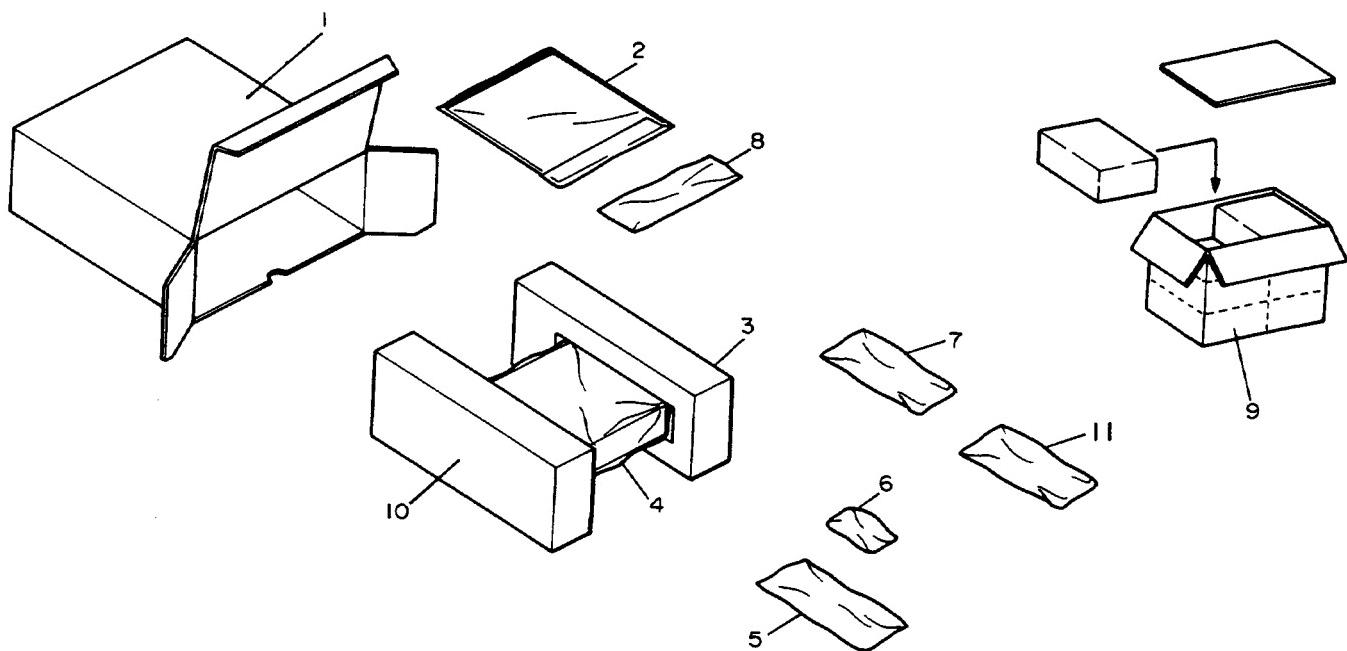


Fig. 77

* 2-1 Owner's Manual

Part No.	Model	Language
CRD1445	DEH-770SDK/WG DEH-760SDK/WG	German, French
CRD1446	DEH-770/EW DEH-760/EW	English, French, German, Spanish, Portuguese
CRD1447	DEH-770/EW DEH-760/EW	Swedish, Norwegian, Dutch, Finnish, Italian
CRD1444	DEH-770/UC DEH-760/UC DEH-660/UC	English, French
CRB1211	DEH-85/US	English
CRD1448	DEH-710/ES DEH-610/ES	English, French, Spanish, Arabic
CRD1449	DEH-630/US	English, Spanish

• Parts List

Mark No.	Description	DEH-770SDK/WG	DEH-770/EW	DEH-760SDK/WG	DEH-760/EW
		Part No.	Part No.	Part No.	Part No.
1	Carton	CHG1943	CHG1941	CHG1944	CHG1942
* 2-1	Owner's Manual	CRD1445	CRD1446	CRD1445	CRD1446
		.....	CRD1447	.....	CRD1447
2-2	Caution Card				
2-3	Caution Card		.....		.....
2-4	Card				
2-5	Passport		.....		.....
2-6	Seal				
2-7	Battery			.....	.....
2-8	Fastener (Rough)	CNM1716	CNM1716	.....	.....
2-9	Fastener (Soft)	CNM1717	CNM1717	.....	.....
3	Styrofoam (R)	CHP1332	CHP1332	CHP1332	CHP1332
4	Cover	CEG1092	CEG1092	CEG1092	C1G1092
* 5	Accessory Assy	CEA1381	CEA1381	CEA1381	CEA1381
6	Cord Assy	CDE3285	CDE3284	CDE3285	CDE3284
7	Panel	CNS1911	CNS1911	CNS1911	CNS1911
8	Case For Detach Grille	CNS2034	CNS2034	CNS2034	CNS2034
9	Contain Box	.....	.....	.....	.....
10	Styrofoam (L)	CHP1331	CHP1331	CHP1331	CHP1331
11	Remote Control Assy	CXA4016	CXA4016	.....	.....
11-1	Battery Cover	CNS2197	CNS2197	.....	.....

* 5 Accessory Assy CEA1381					
Mark No.	Description	Part No.	Mark No.	Description	Part No.
5-1	Screw Assy	CEA1503	5-2	Strap	CNF-111
5-1-1	Screw (×1)	BMZ40P080FMC	5-3	Bush	CNV1917
5-1-2	Screw (×4)	BMZ50P080FMC	5-4	Spring (×1)	CBH-865
5-1-3	Screw (×1)	CBA-102	5-5	Handle (×2)	CNC1631
5-1-4	Screw (×1)	CBA1002			
5-1-5	Nut (×2)	NF50FMC			

• Parts List

Mark No.	Description	DEH-770/UC	DEH-85/US	DEH-760/UC	DEH-710/ES	DEH-660/UC	DEH-630/US	DEH-610/ES
		Part No.	Part No.	Part No.	Part No.	Part No.	Part No.	Part No.
1	Carton	CHG1945	CHG1948	CHG1946	CHG1950	CHG1947	CHG1949	CHG1951
* 2-1	Owner's Manual	CRD1444	CRB1211	CRD1444	CRD1448	CRD1444	CRD1449	CRD1448
2-2	Caution Card				.....		
2-3	Card							
2-4	Seal							
2-5	Battery			.....	.....	.....	.....	.....
2-6	Fastener (Rough)	CNM1716	CNM1716	.....	CNM1716	.....	.....	.....
2-7	Fastener (Soft)	CNM1717	CNM1717	.....	CNM1717	.....	.....	.....
3	Styrofoam (R)	CHP1332	CHP1332	CHP1332	CHP1332	CHP1332	CHP1332	CHP1332
4	Cover	CEG1092	CEG1092	CEG1092	CEG1092	CEG1092	CEG1092	CEG1092
* 5	Accessory Assy	CEA1381	CEA1381	CEA1381	CEA1381	CEA1381	CEA1381	CEA1381
6	Cord Assy	CDE3283	CDE3283	CDE3283	CDE3283	CDE3283	CDE3283	CDE3283
7	Panel	CNS1911	CNS1911	CNS1911	CNS1911	CNS1911	CNS1911	CNS1911
8	Case For Detach Grille	CNS2034	CNS2034	CNS2034	.....	.....	.....	.....
9	Contain Box	CHL1945	CHL1948	CHL1946	CHL1947	CHL1949	.....
10	Styrofoam (L)	CHP1331	CHP1331	CHP1331	CHP1331	CHP1331	CHP1331	CHP1331
11	Remote Control Assy	CXA4015	CXA4017	.....	CXA4016	.....	.....	.....
11-1	Battery Cover	CNS2197	CNS2197	.....	CNS2197	.....	.....	.....

22. ELECTRICAL PARTS LIST

NOTE:

- Parts whose parts numbers are omitted are subject to being not supplied.
- The part numbers shown below indicate chip components.

Chip Resistor
RS1/8S □□J, RS1/10S □□□J
Chip Capacitor (except for CQS....)
CKS..., CCS..., CSZS....

Unit Number :
Unit Name : Amp Unit

MISCELLANEOUS

Mark ===== Circuit Symbol & No. === Part Name Part No.

IC 551	AN7188K
D 951	5227
D 952 954 955 956	ERA15-02VH
D 957 959	ERC04-02FE3

RESISTORS

Mark ===== Circuit Symbol & No. === Part Name Part No.

R 551 552 553 554	RS1/10S2R2J
R 955 956	RS1/10SDR0J
R 957	RS1/10S223J

CAPACITORS

Mark ===== Circuit Symbol & No. === Part Name Part No.

C 551 552 553 554	CQEA104J63
C 555	CEHAQ221M16
C 556	CEA330M16LS
C 557 558	CCSQCH102J50
C 559	CKSOYB103K50

C 951 EMI Filter CCG1006
C 952 CEHAQ102M16
C 953 CEHAQ222M16
C 954 955 956 CEA10M50LL

Unit Number : CWW1327
Unit Name : Composite Part
(DEH-770/UC, DEH-85/US, DEH-710/ES, DEH-770SDK/WG, DEH-770/EW)

Mark ===== Circuit Symbol & No. === Part Name Part No.

IC 1	RS-20
SW 1	Switch(EJECT) CSG-253

Unit Number : CWW1317
Unit Name : Composite Unit(CR352)

Mark ===== Circuit Symbol & No. === Part Name Part No.

VR 1 2 3 4 5 6	Semi-fixed 47kΩ(B) CCP1104
VR 7 8	Semi-fixed 10kΩ(B) CCP1100
R 1 2	RS1/10S752J
R 3 4	RS1/10S393J
R 5 6	RS1/10S563J
R 7 8	RS1/10S184J

Mark ===== Circuit Symbol & No. === Part Name Part No.

SW 906 907 908 909 910	Switch CSG-253
SW 911 912 914 915 916 917 918	Switch CSG-253
IL 901 902 905	Lamp 14V 40mA CEL1025
IL 903 904 905 907 908	Lamp 14V 40mA CEL-147
	LCD CAW1074

CAPACITORS

Mark ===== Circuit Symbol & No. === Part Name Part No.	
C 901	CEA470M6R3LS
C 902	CKSOYB103K50
C 903	CCSQCH301J50
C 904	CKSYB224K25

RESISTORS

Mark ===== Circuit Symbol & No. === Part Name Part No.

R 901 902 903	RD1/4PS103JL
R 904 905	RS1/10S104J
R 905 911 916	RS1/10S162J
R 907 912 917	RS1/10S242J
R 908 913 918	RS1/10S392J

Unit Number :
Unit Name : FM/AM Tuner Unit(DEH-770/UC, DEH-85/US, DEH-760/UC, DEH-660/UC)

MISCELLANEOUS

Mark ===== Circuit Symbol & No. === Part Name Part No.	
IC 51	PA4012B
IC 201	PA4010
O 1	2S8709

O 2	Chip Transistor
O 3	Chip Transistor

O 101	2S1162
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O 201	2SD1819
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O 202	2SK435
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O 203 205	2SC2412K
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D 11 12	DTC124EK
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D 11 12	1SV128A-BB
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Display Unit(DEH-660/UC, DEH-630/US, DEH-610/EW)

Display Unit	DEH-770/UC DEH-85/US DEH-710/ES DEH-770SDK/WG	DEH-660/UC DEH-630/US DEH-610/ES	DEH-660/UC DEH-630/US DEH-610/ES
D901, 902, 903	MA153-MC	.....	.....
D904	MA151-WA	.....	.....
SW913	.....	CSG1014	CSG1014
IL903, 904, 905, 907, 908	CEL-147	CEL-147	.....

L 201	Ferrri-inductor
-------	-----------------

L 203	LAU220K
-------	---------

L 204	LAU470K
-------	---------

L 205	LAU4R7K
-------	---------

L 206	CTF-157
-------	---------

T 51	Coil
------	------

T 52	Coil
------	------

T 201	CTE1022
-------	---------

T 202	CTB1020
-------	---------

T 203	CTB1004
-------	---------

T 204	CTB1040
-------	---------

T 205	CTE1037
-------	---------

T 206	CTE1038
-------	---------

CG 1	CTE1039
------	---------

TH 51 102	DSP-201M
-----------	----------

Thermister	DTN-T204D154K
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CF 51 52	Ceramic Filter
----------	----------------

CF 201	CTF-182
--------	---------

CF 202	CTF1041
--------	---------

X 151	Filter
-------	--------

X 201	CSS1055
-------	---------

X 201	CSS1014
-------	---------

VR 1	Semi-fixed 100kΩ(B)
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VR 51 101 102	VRTB4VS104
---------------	------------

VR 51 101 102	VRTB4VS333
---------------	------------

VR 51 101 102	CWB1035
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RESISTORS

Mark ===== Circuit Symbol & No. === Part Name Part No.

R 901 902 903	LC7582A
D 904	MA153-MC
D 904	MA151A-MA
L 901	Ferrri-inductor
SW 901 902 903 904 905 906 907 908	CEL-157
SW 907 908 909 910 911 912	Switch CSG-253
SW 914 915 916 917 918	Switch CSG-253
IL 901 902 905	Lamp 14V 40mA CEL1013
IL 903 904 905 907 908	Lamp 14V 40mA CEL-147
	LCD CAW1074

RESISTORS

R 901 902 903	RD1/4PS103JL
---------------	--------------

R 904 905	RS1/10S104J
-----------	-------------

R 906 911 915	RS1/10S162J
---------------	-------------

R 907 912 917	RS1/10S242J
---------------	-------------

R 908 913 918	RS1/10S392J
---------------	-------------

R 909 914 919	RS1/10S822J
---------------	-------------

R 910 915 920	RS1/10S303J
---------------	-------------

R 2 7	RS1/10S223J
-------	-------------

R 3	RS1/10S683J
-----	-------------

R 4	RS1/10S682J
-----	-------------

R 5 63	RS1/10S0R0J
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R 6 59	RS1/10S331J
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R 8	RS1/10S331J
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R 9 58	RS1/10S223J
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Mark	Circuit Symbol & No.	Part Name	Part No.
R	10 14		RS1/10S0R0J
R	11		RS1/10S104J
R	12	,	RS1/10S470J
R	54		RS1/10S472J
R	56 104		RS1/10S393J
R	57		RS1/10S562J
R	64		RS1/10S222J
R	101		RS1/10S471J
R	102		RS1/10S822J
R	105		RS1/10S332J
R	106		RS1/10S333J
R	107		RS1/10S102J
R	108		RS1/10S104J
R	111		RS1/10S123J
R	112		RS1/10S684J
R	151 152		RS1/10S152J
R	153		RS1/10S222J
R	201		RS1/10S220J
R	202		RS1/10S681J
R	203 206 214		RS1/10S222J
R	204 213		RS1/10S473J
R	205 209		RS1/10S470J
R	207		RS1/10S822J
R	208 211 212		RS1/10S103J
R	210		RS1/10S682J
R	215		RS1/10S153J

CAPACITORS

Mark	Circuit Symbol & No.	Part Name	Part No.
C	1		CKSQYB102K50
C	2 3 104		CKSQYB103K50
C	4 59		CKSQYF473Z25
C	11 12 13 14		CCSOCH220J50
C	15		CKSQYB223X25
C	51		CKSQYF473Z25
C	52 53		CKSQYB223K25
C	54		CCSQSL101J50
C	55		CKSQYB102K50
C	56		CKSQYF104Z25
C	57		CEAR68M50LS2
C	58		CCSQCH060D50
C	60		CEALNP100M6R3
C	101		CKSQYB392K50
C	102		CKSQYB682K50
C	103		CKSQYB392K50
C	105		CEA2R2M50LL
C	106		CEA220M6R3LL
C	107 108		CKSQYB222K50
C	110		CEA010M50LL
C	111		IC 51
C	112		IC 201
C	151 152		Q 1
C	153		Q 2
C	154 155 156		Q 51
C	157		Q 101
C	201 223 228		Q 201
C	202 212		Q 202
C	203 215 216 219 226		Q 203 205
C	204 208 210		D 201 204
C	205		D 205
C	206 207		CKSQYB103K25

Mark	Circuit Symbol & No.	Part Name	Part No.
C	211		CEA2R2M50LL
C	213		CCSOCH390J50
C	218		CEA2R2M35NPLL
R	54	RS1/10S472J	CCSQCH430J50
R	56 104	RS1/10S393J	CCSQCH100D50
R	57	RS1/10S562J	CSZA010K35L
R	64	RS1/10S222J	CEA470M16LL
R	101	RS1/10S471J	CKSQYB333K25
R	102	RS1/10S822J	CEA4R7M35LS
R	105	RS1/10S332J	CEA470M16LS
R	106	RS1/10S333J	CEA220M16LL
R	107	RS1/10S102J	
R	108	RS1/10S104J	
R	111	RS1/10S123J	
R	112	RS1/10S684J	
R	151 152	RS1/10S152J	
R	153	RS1/10S222J	
R	201	RS1/10S220J	
R	202	RS1/10S681J	
R	203 206 214	RS1/10S222J	
R	204 213	RS1/10S473J	
R	205 209	RS1/10S470J	
R	207	RS1/10S822J	
R	208 211 212	RS1/10S103J	
R	210	RS1/10S682J	
R	215	RS1/10S153J	

FM/AM Tuner Unit(DEH-710/ES, DEH-630/US, DEH-610/ES)

	DEH-770/UC DEH-85/US DEH-760/UC DEH-660/UC	DEH-630/US	DEH-710/ES DEH-610/ES
Q3	2SA1162	.....	.....
D11, 12	1SV128A-BB	.....	.....
L1, 51	CTF1148	CTF1148	CTF1104
L2	.....	.....	CTF1086
L11, 12	CTF1065	.....	.....
L101	CTF1170	CTF1170	CTF1126
VR1	VRTB4VS104	VRTB4VS103	VRTB4VS103
R3	RS1/10S683J	RS1/10S124J	RS1/10S124J
R8	RS1/10S331J	.....	.....
R9	RS1/10S223J	.....	.....
R10	RS1/10S0R0J	RS1/10S0R0J	RS1/10S560J
R11	RS1/10S104J	.....	.....
R12	RS1/10S470J	.....	.....
R13	.....	RS1/10S0R0J	RS1/10S0R0J
R14	RS1/10S0R0J	RS1/10S0R0J	.....
R58	RS1/10S223J	RS1/10S223J	RS1/10S393J
C11, 12, 13, 14	CCSQCH220J50	.....	.....
C15	CKSQYB223K50	.....	.....
C57	CEAR68M50LS2	CEAR68M50LS2	CSZAR33K35

MISCELLANEOUS

Mark	Circuit Symbol & No.	Part Name	Part No.
		Unit Number :	
		Unit Name :	FM/AM Tuner Unit(DEH-770SDK/WG, DEH-760SDK/WG)
C	57		
C	58		
C	60		
C	101		
C	102		
C	103		
C	105		
C	106		
C	107 108		
C	110		
C	111	CEA100M16LL	PA40128
C	112	CEA01M50LL	PA4010
C	151 152	CKSQYB563K25	2SB709
C	153	CSZAR47M35L	DTC124EK
C	154 155 156	CEA3R3M50LL	DTA114TK
C	157	CEA101M10LS	2SD1819
C	201 223 228	CKSQYB103K25	2SK435
C	202 212	CKSQYB332K50	2SC2412K
C	203 215 216 219 226	CKSQYF473Z25	DTC124EK
C	204 208 210	CKSQYB223K25	MA157-MR
C	205	CCSQCH220J50	SVC203-M1
C	206 207	CCSQCH820J50	CTF1104
		L 1 51	CTF1086
		L 2	CTF1126
		L 101	CTF1084
		L 201	

CAPACITORS

Mark	=====	Circuit	Symbol & No.	====	Part Name	Part No.
C		1				CKSQYB102K50
C		2	3 104			CKSQYB103K50
C		4	59			CKSQYF473Z25
C		51				CKSQYF473Z25
C		52	53			CKSQYB223K25

	DEH-770SDK/WG DEH-760SDK/WG	DEH-770/EW DEH-760/EW
Q51	DTA114TK	.....
R60	RS1/10S473J	.....
C105, 211	CEA2R2M50LS2	CEA2R2M50LL
C106	CEA220M6R3LS	CEA220M6R3LL
C110	CEA010M50LS2	CEA010M50LL
C111	CEA100M16LS2	CEA100M16LL
C112	CEA0R1M50LS2	CEA0R1M50LL
C154, 155, 156	CEA3R3M50LS	CEA3R3M50LL
C218	CEALNHP2R2M35	CEA2R2M35WPLL
C224	CEA470M16LS	CEA470M16LL
C230	CEA220M16LS	CEA220M16LL

Unit Number :
 Unit Name : CD Tuner Unit(DEH-770/UC, DEH-85/US, DEH-760/UC)

MISCELLANEOUS

Mark ===== Circuit Symbol & No. === Part Name Part No.

IC 351	CXA1081Q
IC 451 853	M5218FP
IC 452	CWV1213
IC 501	LC7218M
IC 601	CXA1082BQ

IC 651	AN8377N
IC 655 657 662 851 852	M5218FP
IC 668 669	LA6501-FA
IC 701	CXD11670
IC 703	TC9237F

IC 704	TA2009F
IC 751	PD4306
IC 752	M51955A FP
IC 753	M54546AL
IC 961	PA2018

Q 351	2SB1243
Q 352 758 759 760 766	Chip Transistor
Q 451 505 601 705	UN2211
Q 502	Chip Transistor
Q 503 504 515 516 517	2SC3098
	Chip Transistor
	2SC2712

Q 509	Chip Transistor
Q 510 513	2SC3295
Q 602 603	Chip Transistor
Q 651	2SD1048
Q 652 752	Chip Transistor
	UN2111

Q 653	Chip Transistor
Q 751	2SD1859
Q 753	Chip Transistor
Q 754 855 967	2SD601A
Q 755 756 757 761 762	Chip Transistor
	UN2111
	2SB1238

Q 763 764 765 767 968	Chip Transistor
Q 848 849	UN2211
Q 851 852 853 854	DTC3231K
Q 857	DTC3231K
Q 955	2SB709
	2SD1684

D 451 452 853	Chip Diode
D 453 454	MA151WK-MT
D 457	MA3047H
D 501 502 504	MA151WA-MH
D 503 753 758 760 762	MA151WK-MT
	MA153-WC

D 652	RD11JSB1
D 653 754 964 965	ERA15-02VH
D 661 662	HZS2ALL
D 751 752 757 759	Chip Diode
D 755	MA153-WC
	RD6R8JSB1

D 851	Chip Diode
D 963 970	MA151WA-MH
L 501 752	RDSR6JSB2
L 502 701	Inductor 0.33μH
L 751 961	CTF1082
	Inductor 0.33μH
	LAU150K

L 962	Inductor 33μH
TH 351	Thermister
TH 751	CCX1006
BP 401	Thermister
X 501	CCX1007
	Buzzer
	CPV1010
	Crystal Resonator

Mark =====	Circuit Symbol & No.	==== Part Name	Part No.
X 701		Crystal Resonator	CSS1052
X 751		Crystal Resonator	CSS1023
VR 604		Semi-fixed 2.2kΩ	CCP1015
CR 352		Composite Unit	CWW1317
		AM/FM Tunern Unit	
RESISTORS			
R 334 461 462 522 541 656 661 670 695 703		RS1/10S103J	
R 341		RD1/4PS221JL	
R 344 511 515 636 643 726 727 728 729 730		RS1/10S473J	
R 345 505 506 507 512 533 534 542 704		RS1/10S472J	
R 351 352		RD1/4PS110JL	
R 353 381 776 867 868 964		RS1/10S102J	
R 354 378 451 452 518 548		RS1/10S153J	
R 355		RS1/10S113J	
R 356 357 517 669		RS1/10S563J	
R 358 359		RS1/10S563J	
R 360 608		RS1/10S823J	
R 361 383		RS1/10S823J	
R 362		RS1/10S564J	
R 363		RS1/10S223J	
R 364 365 618		RS1/10S105J	
R 366 377 738 740 748 750		RS1/10S562J	
R 367 673 697 753 761 788 793		RS1/10S473J	
R 379		RS1/10S332J	
R 380 616 617 625		RS1/10S203J	
R 382 667		RS1/10S363J	
R 384 540 630		RS1/10S273J	
R 449 450 530 532 536 773 774		RS1/10S0R0J	
R 455 456 457 458 658 659 711 712 714 715		RS1/10S102J	
R 459 460		RS1/10S152J	
R 463 464 535 550 765 767 769 771 787		RS1/10S222J	
R 465		RS1/10S103J	
R 469 501 502 503 504 509 531 538 539 780		RS1/10S222J	
R 508 523 796		RS1/10S474J	
R 510		RS1/10S221J	
R 516 609 614 619 627		RS1/10S104J	
R 521		RS1/10S392J	
R 524 871		RS1/10S122J	
R 525 784 883 884		RS1/10S472J	
R 527 529 853 854 855 856 865 866 869 870		RS1/10S223J	
R 543		RS1/10S470J	
R 544 546 601 602		RS1/10S101J	
R 545		RS1/10S182J	
R 547 779		RS1/10S821J	
R 549		RS1/10S123J	
R 606 623		RS1/10S224J	
R 607		RS1/10S683J	
R 610 655		RS1/10S113J	
R 611 863 864		RS1/10S432J	
R 612		RS1/10S623J	
R 613		RS1/10S624J	
R 620		RS1/10S332J	
R 621		RS1/10S184J	
R 622 662 691 692 737 739 745 746 747 749		RS1/10S103J	
R 624		RS1/10S393J	
R 628 645		RS1/10S183J	
R 634		RS1/10S474J	
R 635 694		RS1/10S822J	
R 637 690		RS1/10S272J	

Mark =====	Circuit Symbol & No.	==== Part Name	Part No.	Mark =====	Circuit Symbol & No.	==== Part Name	Part No.
R 644			RS1/10S682J	C 601	724		CKSQYB222K50
R 651	653		RS1/10S163J	C 606			CEA220M6R3LS
R 652			RS1/10S363J	C 608			CEALNP220M16
R 654			RS1/10S150J	C 609			CKSQYB472K50
R 657	660		RS1/10S272J	C 610			CCSQCH221J50
R 665			RS1/10S562J	C 613			CKSQYB333K25
R 666			RS1/10S393J	C 618			CKSQYB272K50
R 668			RS1/10S183J	C 623			CKSQYB222K50
R 671			RS1/10S105J	C 627	877 878		CCSQCH220J50
R 672			RS1/10S364J	C 628	716		CCSQCH470J50
R 674			RS1/10S133J	C 653			CKSYB224K25
R 676			RS1/10S201J	C 655			CCS0SL681J50
R 677			RS1/10S201J	C 657			CKSQYB393K25
R 693	696		RS1/10S586J	C 661	666	220 μF/10V	CCH1015
R 709	741 792 872		RS1/10S103J	C 663			CKSYB334K25
R 718	719 877 878		RS1/10S102J	C 689			CCSQCH090D50
R 732	733 734 735 736 791 899		RS1/10S473J	C 704	705		CEA470M16LS
R 742	743 744 754 756 758		RS1/8S182J	C 705	964 965 966		CKSQYB561K50
R 751	752		RS1/10S151J	C 707	708		CCDSL471J50
R 755	757 759 795 797 798 799		RD1/4PS103JL	C 709			CEA6R8M35LS
R 760			RS1/10S683J	C 752			
R 762	763		RS1/10S103J	C 753	972		CKSQYB471K50
R 764	766 768 770 785		RS1/10S104J	C 754		Trimmer	CCL1017
R 778			RS1/10S752J	C 755			CCSQCH150J50
R 781	782 783 789 790		RS1/10S222J	C 762			CKSQYB102K50
R 851	852 873 874 897 898		RS1/10S432J	C 874	978		CEA100M16LS2
R 875	876 879 880		RS1/10S622J	C 961		1000 μF/16V	CCH1003
R 881	882		RS1/10S392J	C 962			CEA010M50LS2
R 999			RS1/10S223J	C 963			CEA010M50LS2
				C 980			CEA330M10LS

CAPACITORS

Mark =====	Circuit Symbol & No.	==== Part Name	Part No.
C 351	710 973		CEA101M6R3LS
C 352	505 611 652 662 676 678 751		CKSQYB103K50
C 353	654		CKSQYB333K25
C 354			CASA100M6R3
C 355	522 523 526 534 625 626		CKSQYB103K50
C 356			CKSQYB332K50
C 357	360 361 614 630 651 702 703 714 715		CKSYB224K25
C 358	607 650 757 761 763		CKSQYB473K25
C 370	373 879 880 881 882		CCSQCH220J50
C 371	509 615		CKSQYB102K50
C 372			CCSQCH150J50
C 451	452 616		CEA220M16LS
C 455	456 617 863 864		CEA4R7M35LS
C 457	458 536 537 538 861 862 865 868		CCSQCH330J50
C 459	460 873 967 968 969 976		CEA101M10LS
C 461	462 659 759 853 854 855 856 859 860		CEA100M16LS2
C 501	502		CCSQCH270J50
C 503	510 511 528 655 675 677 974 977 979		CKSQYB473K25
C 504			CKSQYB561K50
C 506	621		CEALNP4R7M16
C 512			CEA470M16LS
C 517	518 524 605 713 758 760 764		CKSQYB104K25
C 519	525 612 620 656 701 971		CKSQYB104K25
C 520	521 629		CKSQYB223K50
C 527	529		CCS0SL101J50
C 535	869 872		CCSQCH330J50

CD Tuner Unit (DEH-710/ES, DEH-660/UC, DEH-630/US, DEH-610/ES)

CD Tuner Unit	DEH-770/UC DEH-85/US DEH-760/UC	DEH-710/ES	DEH-660/UC	DEH-630/US	DEH-610/ES
IC851	M5218FP	M5218FP	M5218FP	.....	.....
Q761, 762	2SB1238	2SB1238	2SB1238	.....	.....
Q763, 764, 765	UN2211	UN2211	UN2211	.....	.....
Q767	UN2211	UN2211	UN2211	.....	.....
Q848, 849	DTC323TK	DTC323TK	DTC323TK	.....	.....
D457	MA151WA-MN	.....	.....	.....	.....
R465	RS1/10S103J	.....	.....	.....	.....
R466	.....	RS1/10S0R0J	RS1/10S0R0J	RS1/10S0R0J	RS1/10S0R0J
R747, 749	RS1/10S103J	RS1/10S103J	RS1/10S103J	.....	.....
R748, 750	RS1/10S562J	RS1/10S562J	RS1/10S562J	.....	.....
R772	.....	RS1/10S302J	.....	.....	RS1/10S302J
R773	RS1/10S0R0J	RS1/10S511J	RS1/10S0R0J	RS1/10S0R0J	RS1/10S511J
R774	RS1/10S0R0J	RS1/10S0R0J	RS1/10S302J	RS1/10S302J	RS1/10S302J
R775	.....	.....	RS1/10S752J	RS1/10S511J	RS1/10S511J
R851, 852	RS1/10S432J	RS1/10S432J	RS1/10S432J	.....	.....
R853, 854, 855	RS1/10S223J	RS1/10S223J	RS1/10S223J	.....	.....
R856	RS1/10S223J	RS1/10S223J	RS1/10S223J	.....	.....
R877, 878	RS1/10S102J	RS1/10S102J	RS1/10S102J	.....	.....
C859, 860	CEA100M16LS2	CEA100M16LS2	CEA100M16LS2	.....	.....
C861, 862	CCSQCH330J50	CCSQCH330J50	CCSQCH330J50	.....	.....
C881, 882	CCSQCH220J50	CCSQCH220J50	CCSQCH220J50	.....	.....
C709	CCDSL471J50	.....	CCDSL471J50	CCDSL471J50	.....

Unit Number :

Unit Name : CD Tuner Unit (DEH-770SDK/WG)

MISCELLANEOUS

Mark =====	Circuit Symbol & No.	Part Name	Part No.					
Q	455	652	752					
Q	502	Chip Transistor	UN2111					
Q	503	504	514	515	516	517	Chip Transistor	2SC3098
Q	508	Chip Transistor	2SC2712					
Q	509	Chip Transistor	UN2212					
IC	351	CXA1081Q	2SC3295					
IC	451 853	M5218FP	2SC2712					
IC	452	CWW1213	2SD1048					
IC	501	LC7218M	2SD1760F5					
IC	502	KHA172	2SD601A					
IC	601	CXA1082BQ	2SD1859					
IC	651	AN8377H						
IC	655 657 662 851 852	M5218FP	2SD601A					
IC	668 669	LA6501-FA	UN2111					
IC	701	CXD1167Q	2SB1238					
IC	703	TC9237F	UN2211					
IC	704	TA2009F	DTC323TK					
IC	751	PD4306	2SB8709					
IC	752	M51955AEP	2SD1684					
IC	753	M54546AL	MA151WK-MT					
IC	961	PA2018	MA3047H					
Q	351	2SB1243	MA151WA-MN					
Q	352 758 759 760 766	Chip Transistor	MA151WK-MT					
Q	451 505 601 705	Chip Transistor	MA153-MC					
Q	453 454 848 849	Chip Transistor	RD11JS81					
			ERA15-02VH					

Mark	Circuit Symbol & No.						Part Name	Part No.	Mark	Circuit Symbol & No.						Part Name	Part No.						
D	661	662					HZS2ALL		R	549								RS1/10S123J					
D	751	752	757	759			Chip Diode	MA153-MC	R	606	623							RS1/10S224J					
D	755							RD6R8JSB1	R	607								RS1/10S683J					
D	963	970						RD5R6JSB2	R	610	655							RS1/10S113J					
L	501	752					Inductor 0.33μH	CTF1082	R	611	863	864						RS1/10S432J					
L	502	701					Inductor 0.33μH	CTF1082	R	612								RS1/10S623J					
L	751	961					Ferrri-Inductor	LAU150K	R	613								RS1/10S624J					
L	962						Inductor 33μH	CTF1081	R	620								RS1/10S332J					
TH	351						Thermister	CCX1006	R	621								RS1/10S184J					
TH	751						Thermister	CCX1007	R	624								RS1/10S393J					
BP	401						Buzzer	CPV1010	R	628	645	775						RS1/10S183J					
X	501						Crystal Resonator	CSS1030	R	634								RS1/10S474J					
X	502						Ceramic Resonator	CSS1061	R	635	694							RS1/10S822J					
X	701						Crystal Resonator	CSS1052	R	637	690							RS1/10S272J					
X	751						Crystal Resonator	CSS1023	R	644								RS1/10S682J					
VR	604						Semi-fixed 2.2KΩ (B)	CCP1015	R	651	653							RS1/10S163J					
CR	352						Composite Unit	CWW1317	R	652								RS1/10S363J					
							FM/AM Tuner Unit		R	654							RS1/10S150J						
									R	657	660						RS1/10S272J						
									R	665							RS1/10S562J						
RESISTORS																							
Mark	Circuit Symbol & No.						Part Name	Part No.	R	666								RS1/10S393J					
R	334	461	462	522	541	656	661	670	695	703	RS1/10S103J	R	668					RS1/10S183J					
R	341										RD1/4PS221JL	R	671					RS1/10S105J					
R	344	511	514	515	636	643	726	727	728	729	RS1/10S473J	R	672					RS1/10S364J					
R	345	505	506	507	512	533	534	542	704		RS1/10S472J	R	674					RS1/10S133J					
R	351	352									RD1/4PS110JL	R	676					RS1/10S201J					
R	353	381	776	867	868	964					RS1/10S102J	R	677					RS1/10S201J					
R	354	378	451	452	518	548					RS1/10S153J	R	693	696				RS1/10S586J					
R	355										RS1/10S113J	R	709	741	792	872		RS1/10S103J					
R	356	357	517	669							RS1/10S563J	R	718	719	877	878		RS1/10S102J					
R	358	359									RS1/10S563J	R	730	732	733	734	735	736	791	899	RS1/10S473J		
R	360	608									RS1/10S823J	R	742	743	744	754	756	758			RS1/10S182J		
R	361	383									RS1/10S823J	R	747	749	762	763					RS1/10S103J		
R	362										RS1/10S564J	R	751	752						RS1/10S151J			
R	363										RS1/10S223J	R	755	757	759	795	797	798	799		RD1/4PS103JL		
R	364	365	518								RS1/10S105J	R	760							RS1/10S683J			
R	366	377	738	740	748	750					RS1/10S562J	R	764	766	768	770	785			RS1/10S104J			
R	367	673	697	753	761	788	793				RS1/10S473J	R	772	774						RS1/10S302J			
R	379										RS1/10S332J	R	773	780	781	782	783	789	790		RS1/10S222J		
R	380	616	617	625							RS1/10S203J	R	778							RS1/10S752J			
R	382	667									RS1/10S363J	R	851	852	873	874	897	898			RS1/10S432J		
R	384	540	630								RS1/10S273J	R	875	876	879	880					RS1/10S622J		
R	453	530	532	536							RS1/10S0R0J	R	881	882						RS1/10S392J			
R	455	456	457	458	658	659	711	712	714	715	RS1/10S102J	R	999								RS1/10S223J		
R	463	464	520	535	550	765	767	769	771	787	RS1/10S222J												
R	466										RS1/10S0R0J	C	351	710	973								
R	469	501	502	503	504	509	528	531	538	539	RS1/10S222J	C	352	505	611	552	662	676	678	751		CEA101M6R3LS	
R	470	471	622	662	691	692	737	739	745	746	RS1/10S103J	C	353	654							CKS0YB103K50		
R	508	523	796								RS1/10S474J	C	354								CKS0YB333K25		
R	510										RS1/10S221J	C	355	513	522	523	526	534	625	626	CASA100M6R3		
R	516	609	614	619	627						RS1/10S104J	C	356								CKS0YB103K50		
R	519										RS1/10S182J	C	357	360	361	614	630	651	702	703	714	715	CKS0YB24K25
R	524	871									RS1/10S122J	C	358	607	650	757	761	763				CKS0YB473K25	
R	525	784	883	884							RS1/10S472J	C	370	373	879	880	881	882			CCS0CH220J50		
R	526										RS1/10S684J	C	371	509	615						CKS0YB102K50		
R	527	529	853	854	855	856	865	866	869	870	RS1/10S223J	C	372								CCS0CH150J50		
R	543										RS1/10S470J	C	451	452	512	616					CEA101M16LS		
R	544	546	601	602							RS1/10S101J	C	453	454	455	456	617	863	864		CEA4R7M35LS		
R	545										RS1/10S182J	C	457	458	536	537	538	861	862	865	868	CCS0CH330J50	
R	547	775									RS1/10S821J	C	459	460	873	967	968	969	976		CEA101M10LS		

Mark	Circuit Symbol & No.								Part Name	Part No.	Mark	Circuit Symbol & No.								Part Name	Part No.
C	461	462	659	759	853	854	855	856	859	860	CEA100M16LS2	C	623								CKSQYB222K50
C	501	502									CCS0CH270J50	C	627	877	878						CCS0CH220J50
C	503	510	511	528	665	675	677	974	977	979	CKSQYB473K25	C	628	716							CCS0CH470J50
C	504										CKSQYB561K50										
C	506	621									CEALNP4R7M16	C	653								CKSYB224K25
C	507										CS2SR47M20	C	655								CCS0SL681J50
C	515										CKSQYB683K25	C	657								CKSQYB393K25
C	516	706	964	965	966						CEA470M16LS	C	661	666		220 μF/10V					CCH1015
C	517	518	524	605	713	758	760	764			CKSQYB104K25	C	663								CKSYB334K25
C	519	525	612	620	656	701	971				CKSQYB104K25	C	689								CKSYB222K50
C	520	521	629								CKSQYB223K50	C	704	705							CCS0CH090D50
C	527	529									CCS0SL101J50	C	707	708							CKSQYB561K50
C	530										CS2SR33M35	C	752								CEA6R8M35LS
C	533										CS2ST4R7M35	C	753	972							CKSQYB471K50
C	535	869	872								CCS0CH330J50	C	755	756							CCS0CH300J50
C	601	724									CKSQYB222K50	C	762								CKSQYB102K50
C	606										CEA220M6R3LS	C	874	978							CEA100M16LS2
C	608										CEALNP220M16	C	961			1000 μF/16V					CCH1003
C	609										CKSQYB472K50	C	962								CEA010M50LS2
C	610										CCS0CH221J50	C	963								CEA330M10LS
C	613										CKSQYB333K25	C	980								
C	618										CKSQYB272K50										

CD Tuner Unit (DEH-770/EW, DEH-760SDK/WG, DEH-760/EW)

CD Tuner Unit	DEH-770SDK/WG	DEH-760SDK/WG	DEH-770/EW	DEH-760/EW
IC502	KHA172	KHA172	.....	.....
IC851	M5218FP	.....	M5218FP	.....
Q453, 454	DTC323TK	DTC323TK	.....	.....
Q455	UN2111	UN2111	.....	.....
Q514	2SC2712	2SC2712	.....	.....
Q848, 849	DTC323TK	.....	DTC323TK	.....
D455	MA151WA-MN	MA151WA-MN	.....	.....
D456	MA151WA-MN	MA151WA-MN	.....	.....
X502	CSS1061	CSS1061	.....	.....
R449, 450	.....	.....	RS1/10S0R0J	RS1/10S0R0J
R453	RS1/10S0R0J	RS1/10S0R0J	.....	.....
R470, 471	RS1/10S103J	RS1/10S103J	.....	.....
R514	RS1/10S473J	RS1/10S473J	.....	.....
R526	RS1/10S684J	RS1/10S684J	.....	.....
R528	RS1/10S222J	RS1/10S222J	.....	.....
R773	RS1/10S222J	RS1/10S222J	RS1/10S122J	RS1/10S122J
R851, 852	RS1/10S432J	.....	RS1/10S432J	.....
R853, 854, 855, 856	RS1/10S223J	.....	RS1/10S223J	.....
R877, 878	RS1/10S102J	.....	RS1/10S102J	.....
C453, 454	CEA4R7M35LS	CEA4R7M35LS	.....	.....
C512	CEA220M16LS	CEA220M16LS	CEA470M16LS	CEA470M16LS
C513	CKSQYB103K50	CKSQYB103K50	.....	.....
C515	CKSQYB683K25	CKSQYB683K25	.....	.....
C516	CEA470M16LS	CEA470M16LS	.....	.....
C529	CCS0SL101J50	CCS0SL101J50	CCS0SL221J50	CCS0SL221J50
C530	CS2SR33M35	CS2SR33M35	.....	.....
C533	CS2ST4R7M35	CS2ST4R7M35	.....	.....
C859, 860	CEA100M16LS2	.....	CEA100M16LS2	.....
C861, 862	CCS0CH330J50	.....	CCS0CH330J50	.....
C881, 882	CCS0CH220J50	.....	CCS0CH220J50	.....



Service Manual

**SERVICE GUIDE
ORDER NO.
CRT 1161**

CD MECHANISM UNIT

CX-173

- This service manual is a description of the CD mechanism found in the model numbers listed in the table below.
- When performing repairs use this manual together with the specific manual for the model under repair.

Model	Service Manual
DEH-66/UC	CRT1166
DEH-66SDK/WG	
DEH-66/EW	
DEH-66/EI	

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PIONEER ELECTRONICS SERVICE INC. P.O. Box 1760, Long Beach, California 90801 U.S.A.
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1. DISASSEMBLY

- Disassembly of the Carriage Unit

Note: There may be times when the names of parts used in this manual are not the same as those used in the lists accompanying the Exploded View. If a different name is used here, the part name given in the Exploded View is also provided in parentheses ().

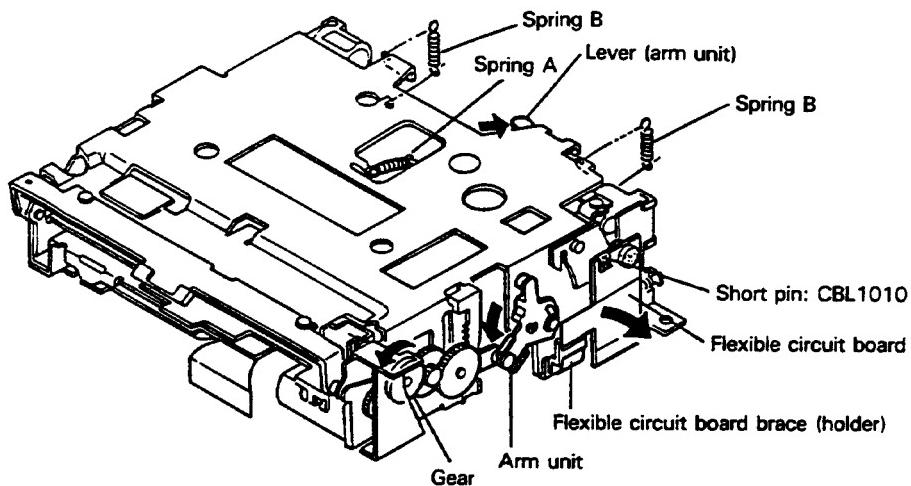


Fig. 1

1. Put the mechanism unit into a loading complete state. (Move the lever back and rotate the gear while pressing down lightly on the arm unit. Rotate the gear until the three carriage unit shafts are free and the unit is supported by the four damper units.)
2. Remove Spring A and two Springs B.
3. Remove the flexible circuit board from the flexible circuit board brace.

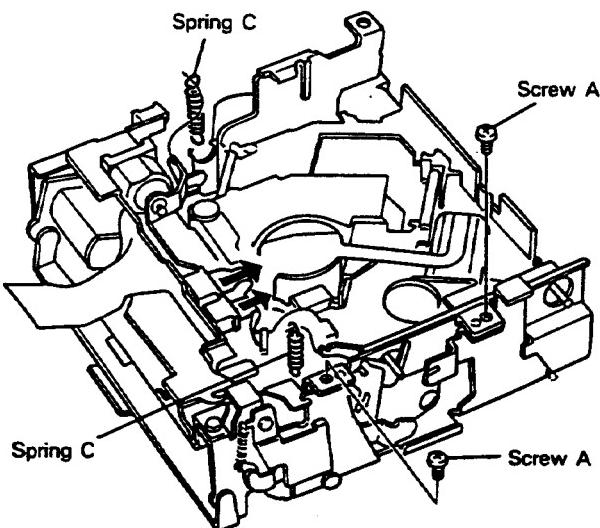


Fig. 2

4. Turn the mechanism unit upside down.
5. Remove the two Springs C.
6. Remove the two flexible circuit boards from their connectors.
7. Remove the two Screws A.

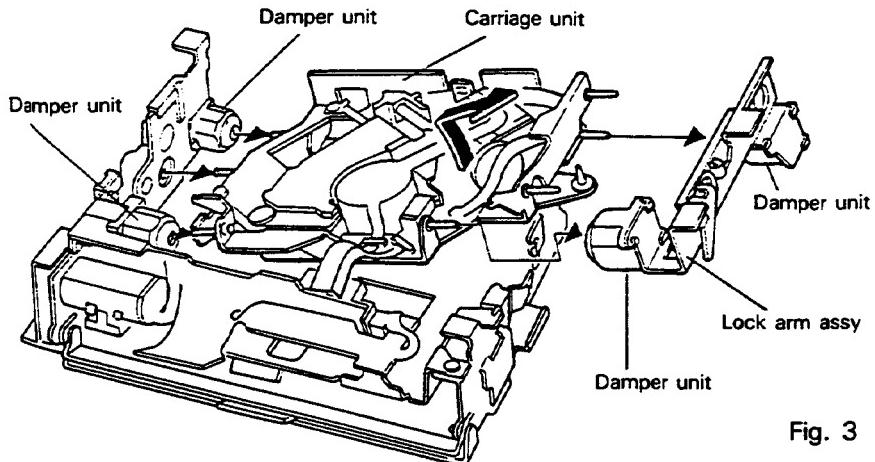


Fig. 3

8. Lift the lock arm assembly and then pull out the carriage unit.
9. Remove the carriage unit from the lock arm assembly.
Note: The damper units are lined with a thin rubber film. Be careful not to damage this when disassembling.

● Disassembly of the Carriage Motor Unit

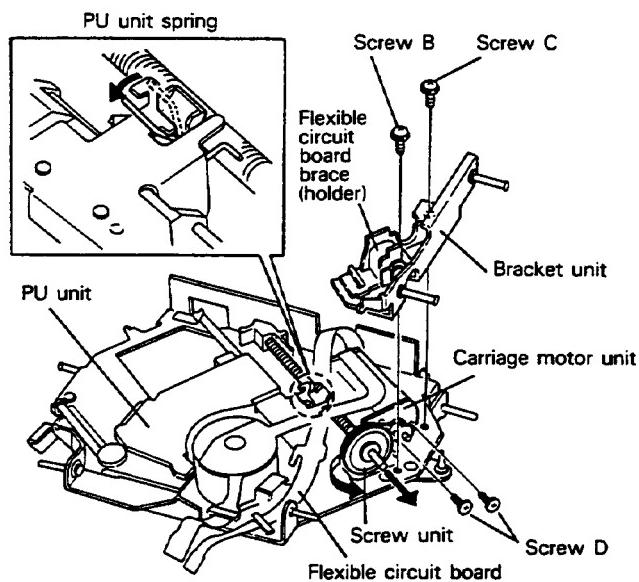


Fig. 4

1. After removing the Screw B and Screw C, remove the bracket unit. At this time remove the flexible circuit board from the flexible circuit board brace.
2. Remove the belt.
3. Cock the PU unit spring as shown in Fig. 4 and then move the PU unit to its outermost position.
(Cocking the spring disengages the screw unit so that the PU unit can be moved by hand from above.)
4. Pull the screw unit out of the assembly.
5. Remove the two Screws D and then the carriage motor unit.
Note: When reinstalling the carriage motor unit, tighten Screw D and seal it.

● Disassembly of the PU Unit

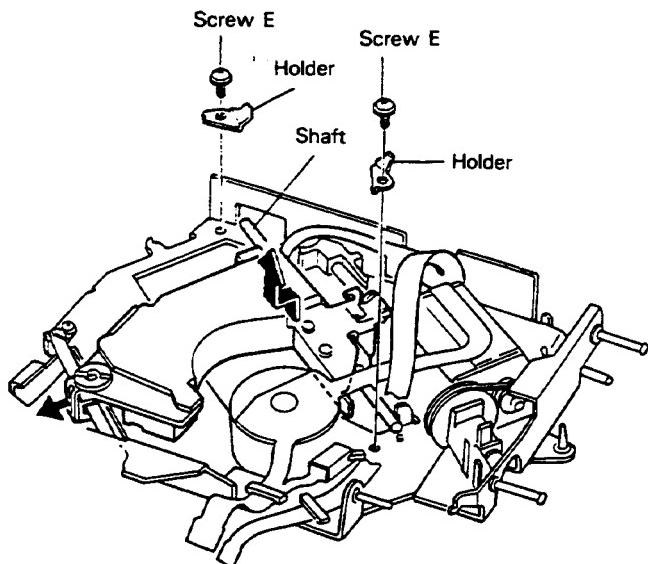


Fig. 5

1. Cock the PU unit spring as shown in Fig. 4. Move the PU unit to the center of the shaft for easy removal.
2. Remove the two Screws E and then the holders.
3. Remove the PU unit, lifting it from the shaft side where the holders have been removed and being careful not to catch the shaft on the opposite side.
4. Pull the shaft out of the PU unit.

● Disassembly of the Spindle Motor Unit

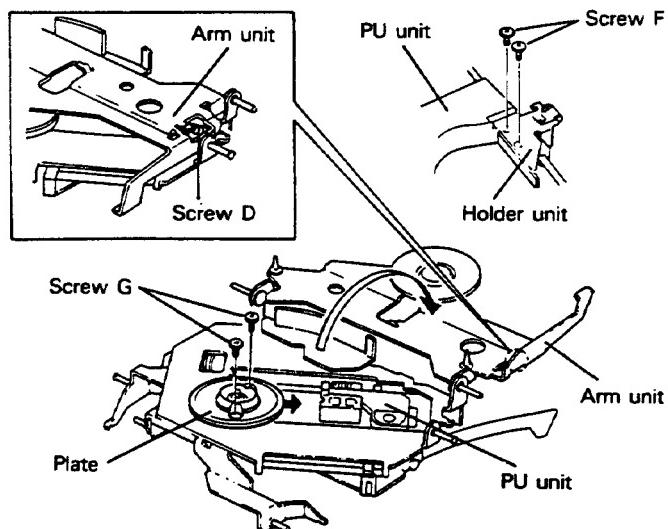


Fig. 6

1. Remove the two Screws F and then remove the holder unit from the PU unit.
2. Cock the PU unit spring as shown in Fig. 4 and move the PU unit to its outermost position.
3. Turn the whole carriage unit right side up.
4. Remove Screw D and turn the arm unit upside down.
5. Turn the spindle motor plate so that the holes on the plate are at the position of the screws underneath.
6. Remove the two Screws G.
Note: When reinstalling the spindle motor unit, tighten the Screws G and seal them.
7. Slide the spindle motor unit onto its side and remove it.

- Disassembly of the Loading Motor Unit

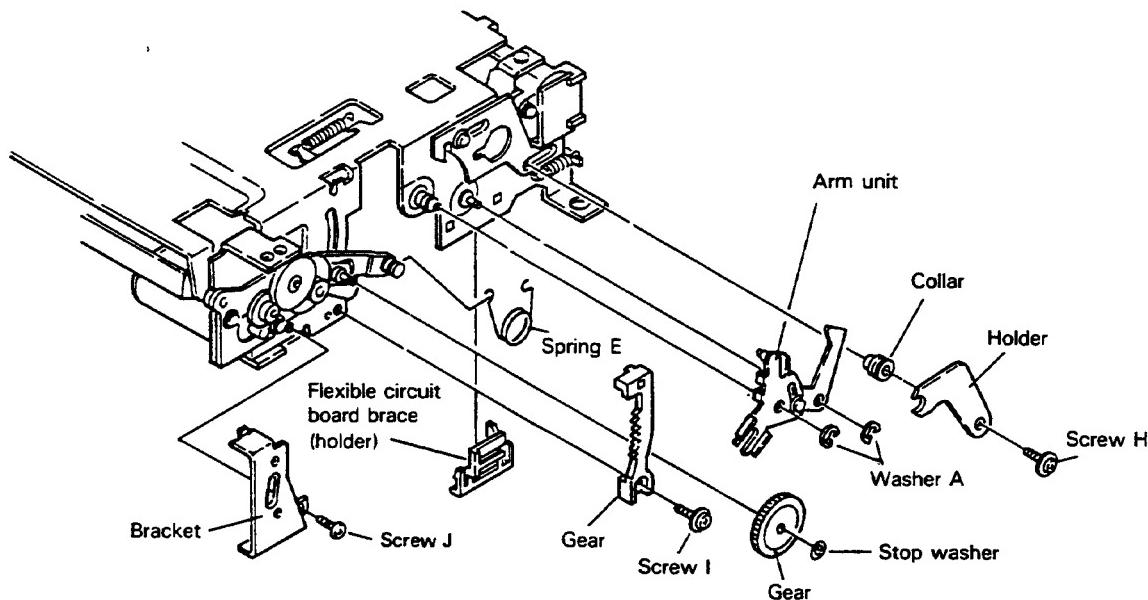
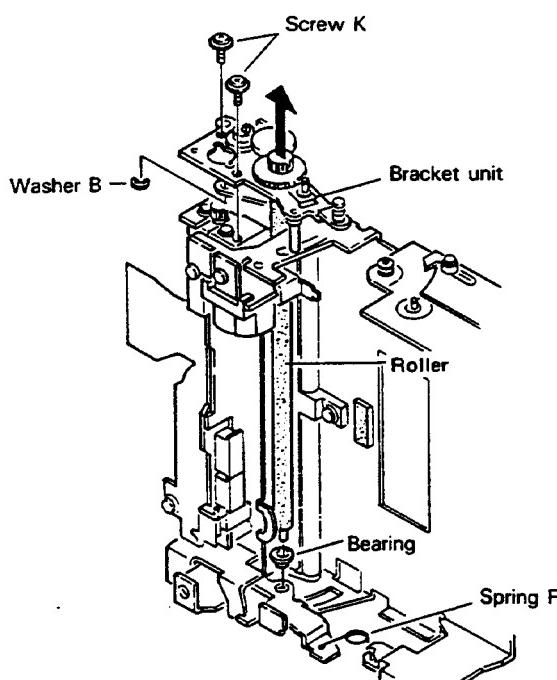


Fig. 7

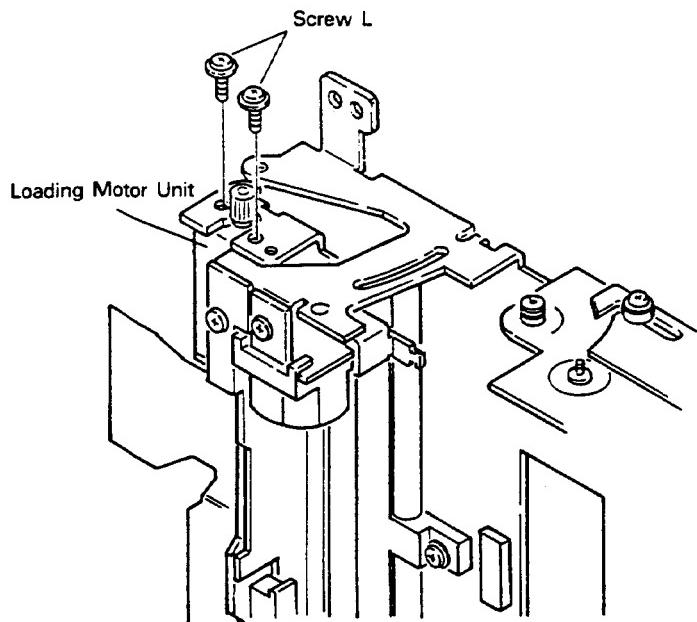
1. Remove the carriage unit.
(Refer to the previous section entitled, "Disassembly of the Carriage Unit.")
2. Remove the flexible circuit board brace.
3. Remove Screw H and then the holder.
Note: When Screw H is removed, the collar will also come free. Be sure not to lose it.

4. Remove the Screw E.
5. Remove the two Washers A and then the arm unit.
6. Remove the stop washer and then the gear.
7. Remove Screw I and then the gear.
8. Remove Screw J and then the bracket.



9. Remove Spring F.
10. Remove washer B.
11. Remove the two Screws K and then pull out the bracket unit.
Note: The bearing at the tip of the roller will also come loose. Be careful not to lose it.

Fig. 8



12. Remove the two Screws L and then the loading motor unit.

Fig. 9

2. MECHANISM DESCRIPTION

- Loading Operation

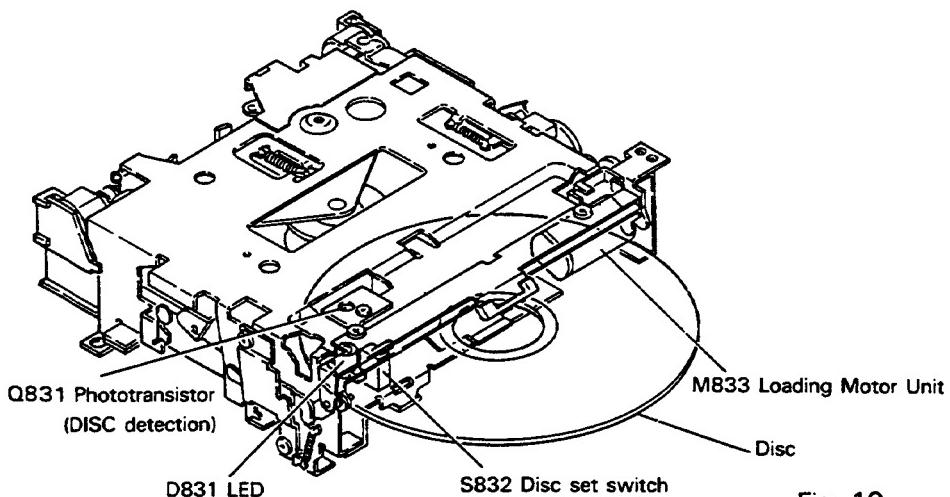


Fig. 10

1. When a disc is inserted into the unit, it enters between the LED and the phototransistor with the result that the light from the LED to the phototransistor is blocked.
2. When the phototransistor detects a disc presence in the unit, the loading motor begins to rotate and loading begins.
3. When the loading motor rotates, the roller is turned and the disc is moved into the unit. (Fig. 11)

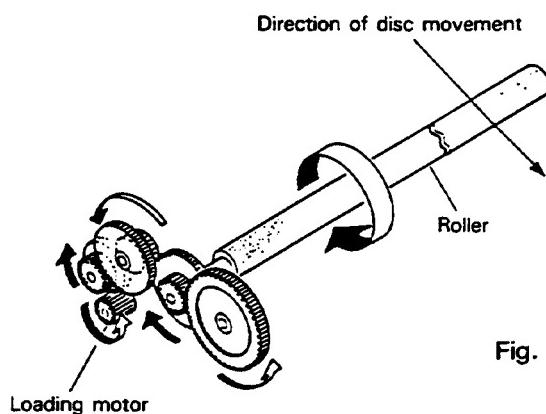


Fig. 11

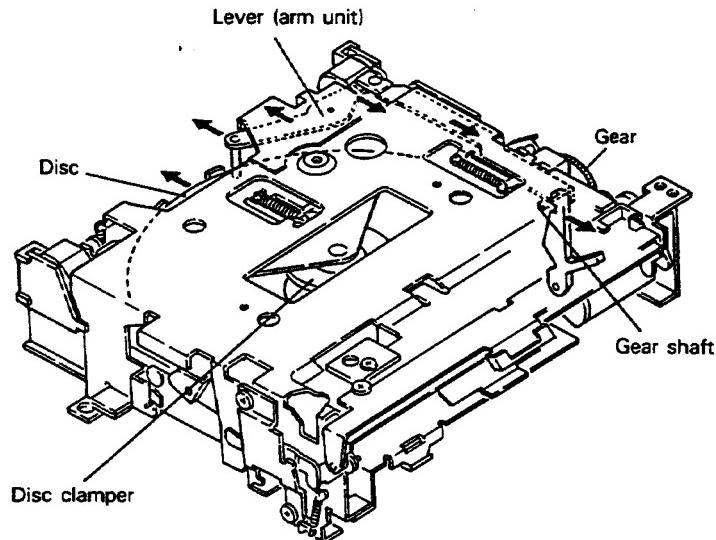


Fig. 12

4. When the disc pushes on the lever, the gear shaft lock is released. The gear meshes with another internal toothed gear and is lowered. (See Figs. 12, 13)
 5. The action of the gear shaft moving down lowers the disc clamp and the disc is held in place.
 6. As the gear is lowered when it meshes with the internal toothed gear, the gear unit also is lowered and the disc set switch pressed.
 7. At the same time, the disc door is lowered and the disc insert door is blocked to prevent the introduction of another disc.
- The three shafts of the carriage unit are in a free mode and the carriage unit is in an anti-vibration mode supported by the four damper units. (Fig. 14)
When the disc set switch is turned on, loading motor rotation stops and the loading operation is complete.

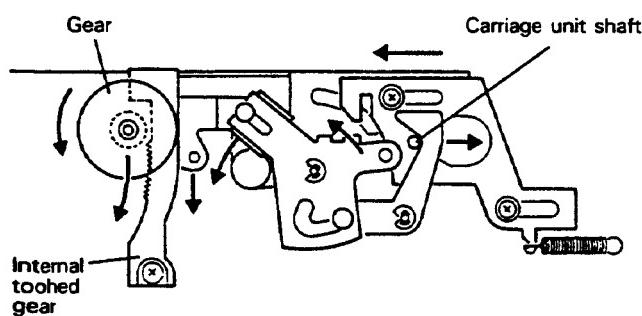


Fig. 13

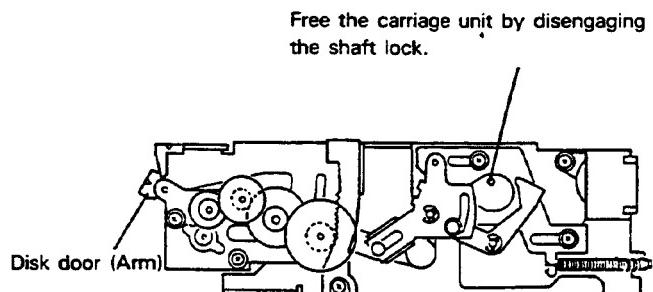
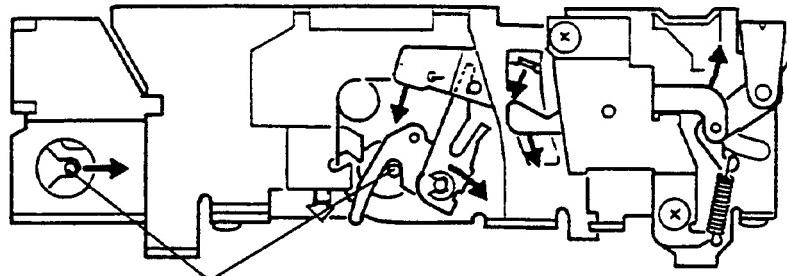


Fig. 14

(view of reverse side)



Free the carriage unit by disengaging
the shaft lock.

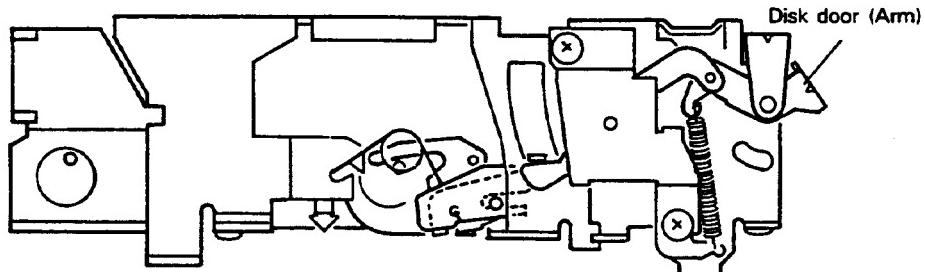
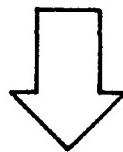


Fig. 15